

Preparing Today's High School Students for Tomorrow's Opportunities

CPEC June 2006

American Diploma Project

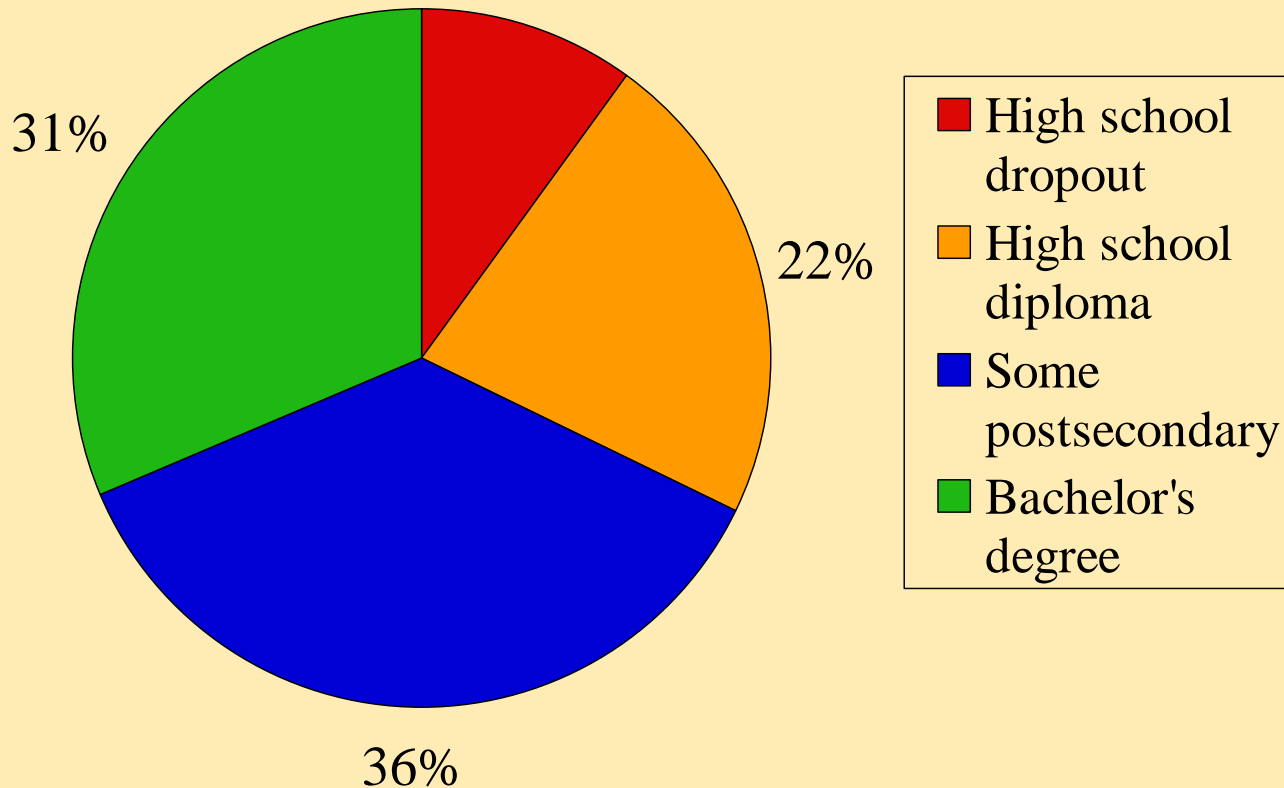
- How well prepared are our students for the world after high school?
- What does it mean to be prepared for college and work?
- Do we expect all of our students to be prepared?
- Closing the expectations gap — what will it take?

American Diploma Project

How well prepared are our students?

A high school diploma is not the last educational stop required

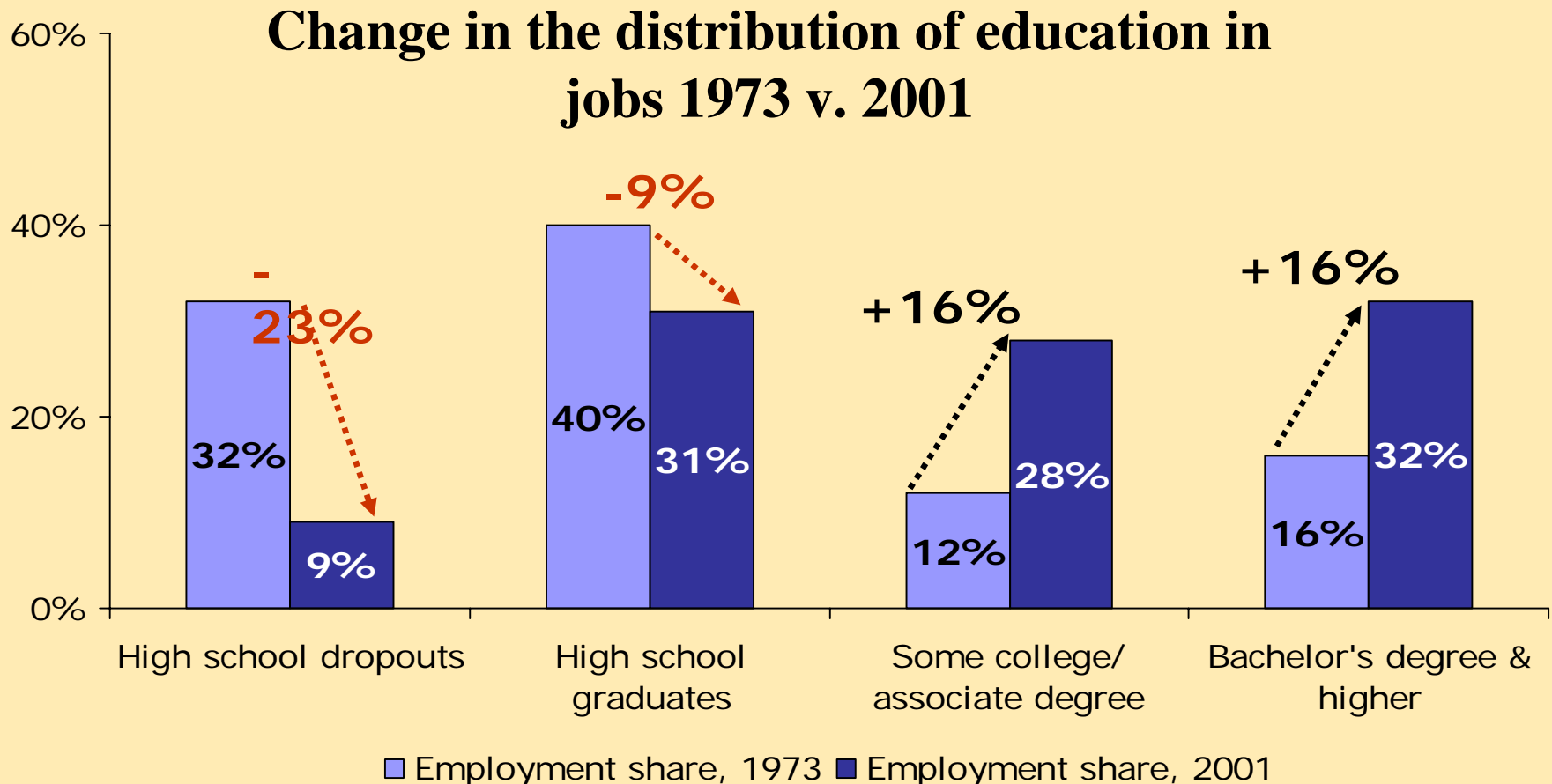
Share of new jobs, 2000–10
10%



- Jobs that require at least some postsecondary education will make up more than two-thirds of new jobs.

Source: Carnevale, Anthony P. and Donna M. Desrochers, *Standards for What? The Economic Roots of K–16 Reform*, Educational Testing Service, 2003.

Jobs in today's workforce require more education



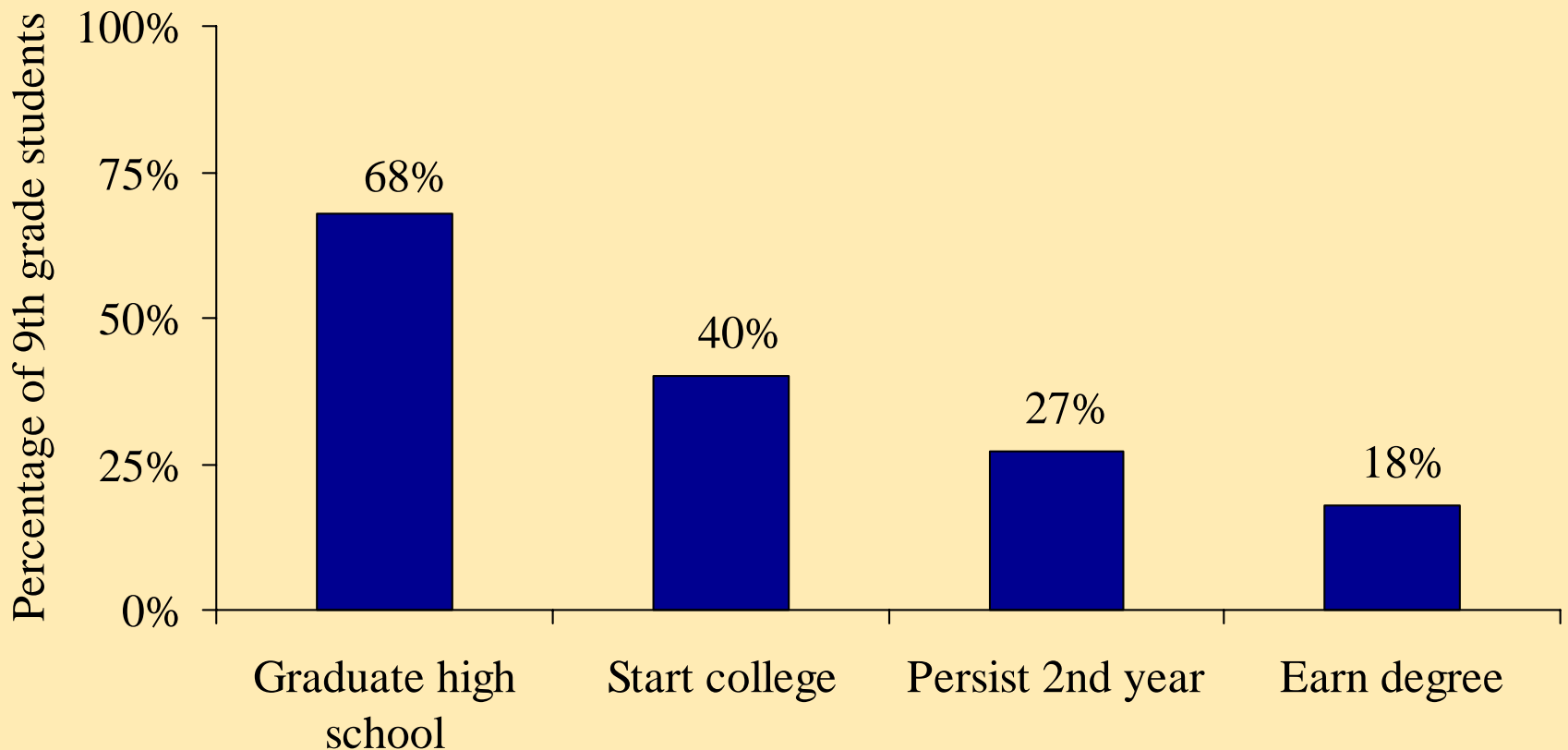
Source: Carnevale, Anthony P. and Donna M. Desrochers, *Standards for What? The Economic Roots of K-16 Reform*, Educational Testing Service, 2003.

How does earning power differ between H.S. & college graduates?

Educational Attainment and Median Earnings

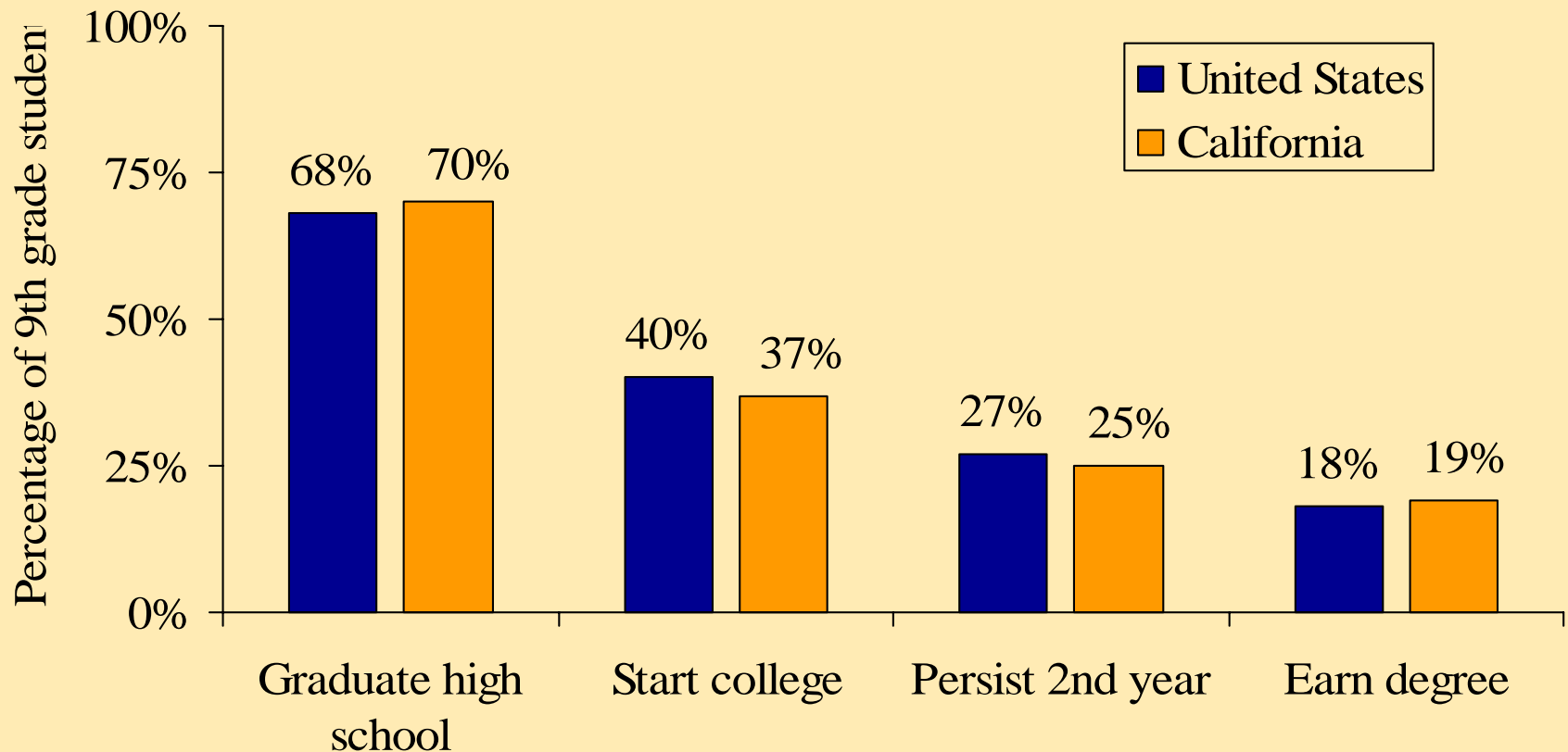
Education	Annual	Lifetime
H.S. Drop-Out	\$22 K	\$1.1 million
H.S. Diploma	\$31 K	\$1.4 million
Associate Degree	\$38 K	\$1.8 million
Bachelor's Degree	\$50 K	\$2.5 million

Too many U.S. students drop out of the education pipeline



Source: National Center for Public Policy & Higher Education, *Policy Alert*, April 2004. Data are estimates of pipeline progress rather than actual cohort.

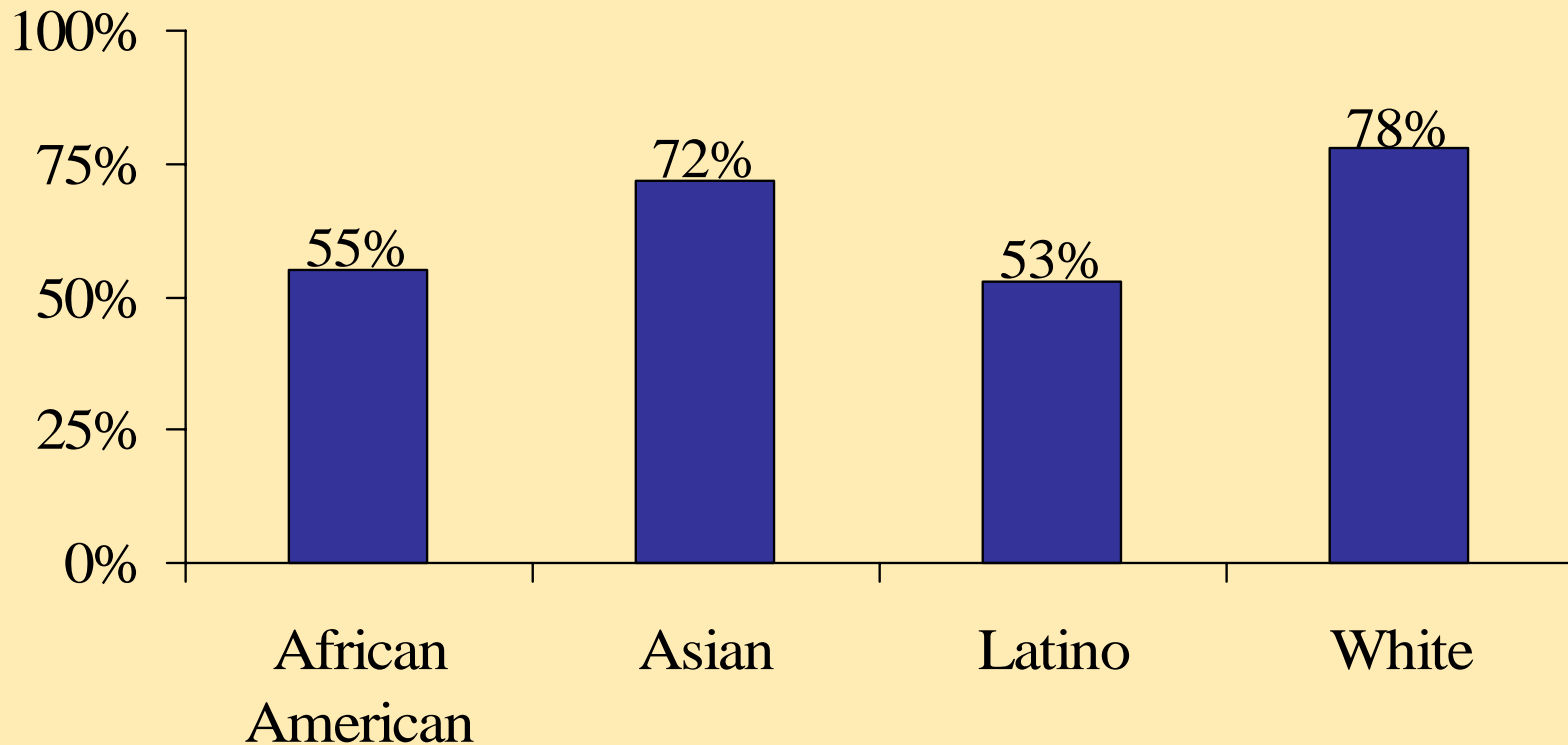
How does California stack up?



Source: National Center for Public Policy & Higher Education, *Policy Alert*, April 2004. Data are estimates of pipeline progress rather than actual cohort.

How many high school students graduate on time in the U.S.?

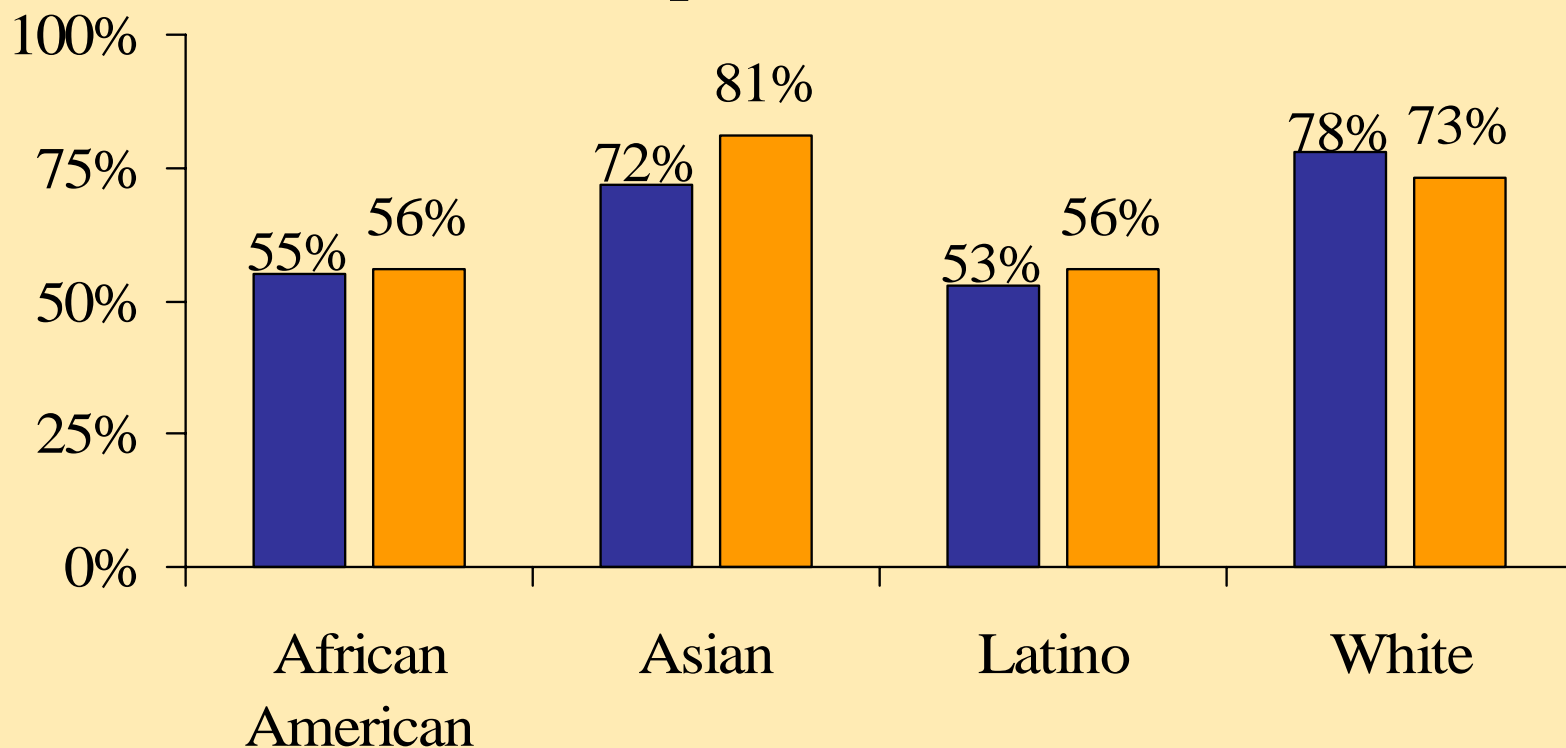
Freshmen Graduating On Time with a Regular Diploma (2003)



Source: Manhattan Institute, April 2006, Leaving Boys Behind: Public High School Graduation Rates.

Are graduation rates equitable in California?

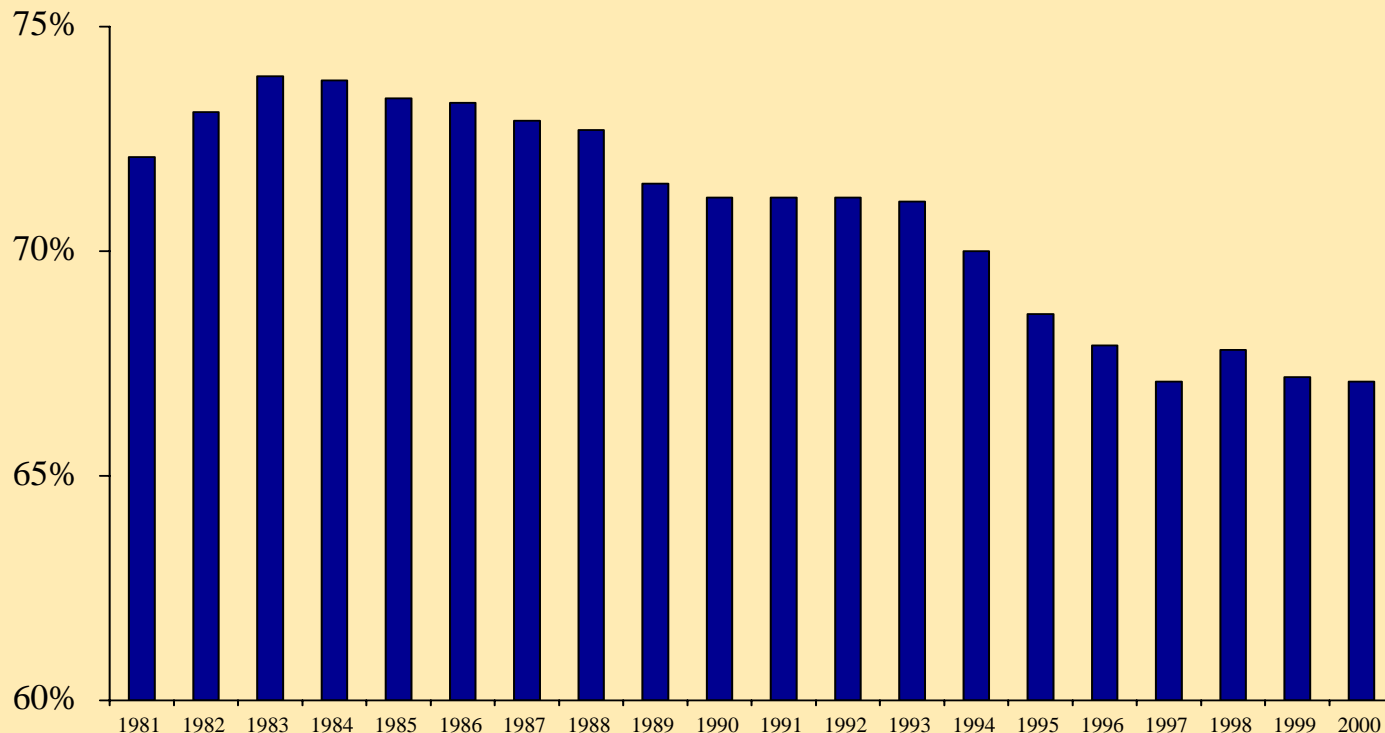
Freshmen Graduating On Time with a Regular Diploma (2003)



Source: Manhattan Institute, April 2006, Leaving Boys Behind: Public High School Graduation Rates.

U.S. high school graduation rates have dropped over past 20 years

Public high school graduation rates, 1981–2000



Source: Mortenson, T., "Chance for College by Age 19 by State in 2000," *Postsecondary Education Opportunity: The Environmental Scanning Research Letter of Opportunity for Postsecondary Education*, No. 123, The Mortenson Research Center on Public Policy, September 2002.

High school graduation rate: United States trails most countries

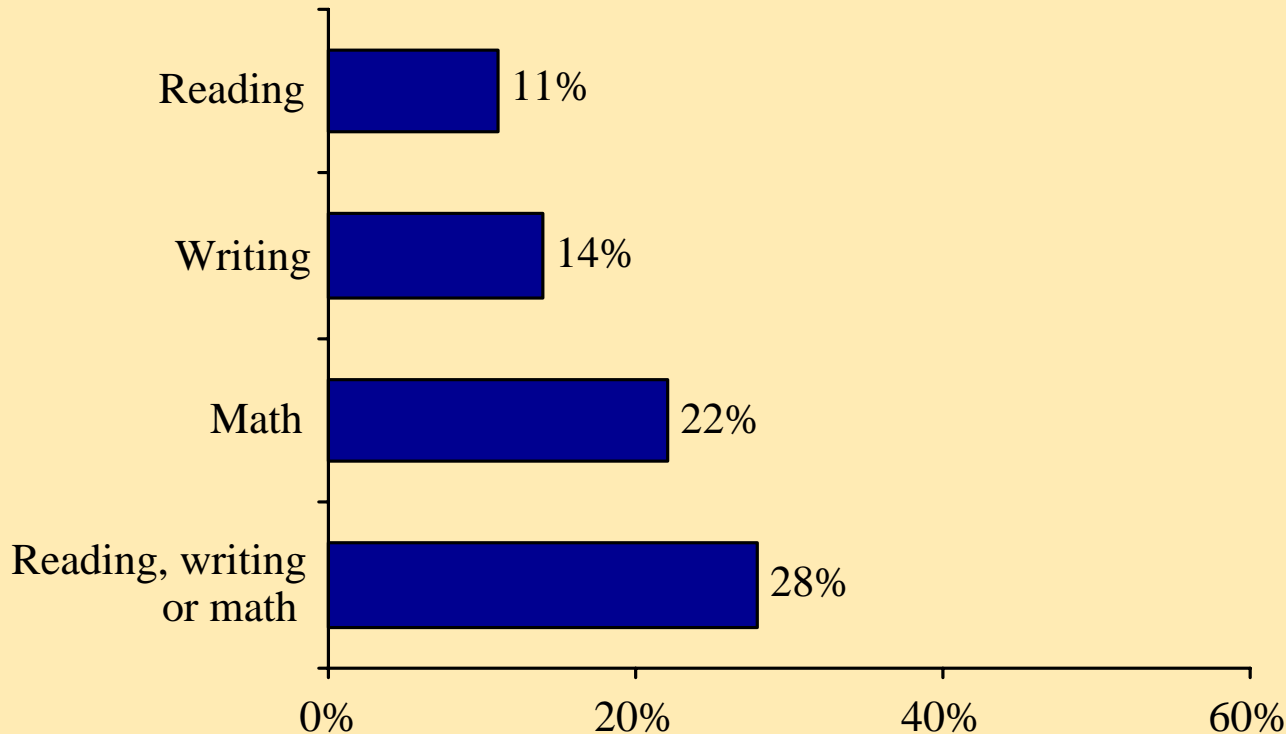
	OECD Reporting Country	Graduation Rate (%)
1	Denmark	100
2	Norway	97
3	Germany	93
4	Japan	92
5	Poland	90
5	Switzerland	90
7	Finland	85
7	Greece	85
9	France	82

9	Hungary	82
9	Italy	82
12	Czech Republic	81
13	Belgium	79
13	Iceland	79
15	Ireland	77
16	United States	73
17	Sweden	72
18	Luxembourg	68
18	Spain	68
20	Slovak Republic	61

Source: Organisation for Economic Co-operation and Development, *Education at a Glance 2004*, 2004.

College bound does not necessarily mean college ready

Percentage of U.S. first-year students in two-year and four-year institutions requiring remediation

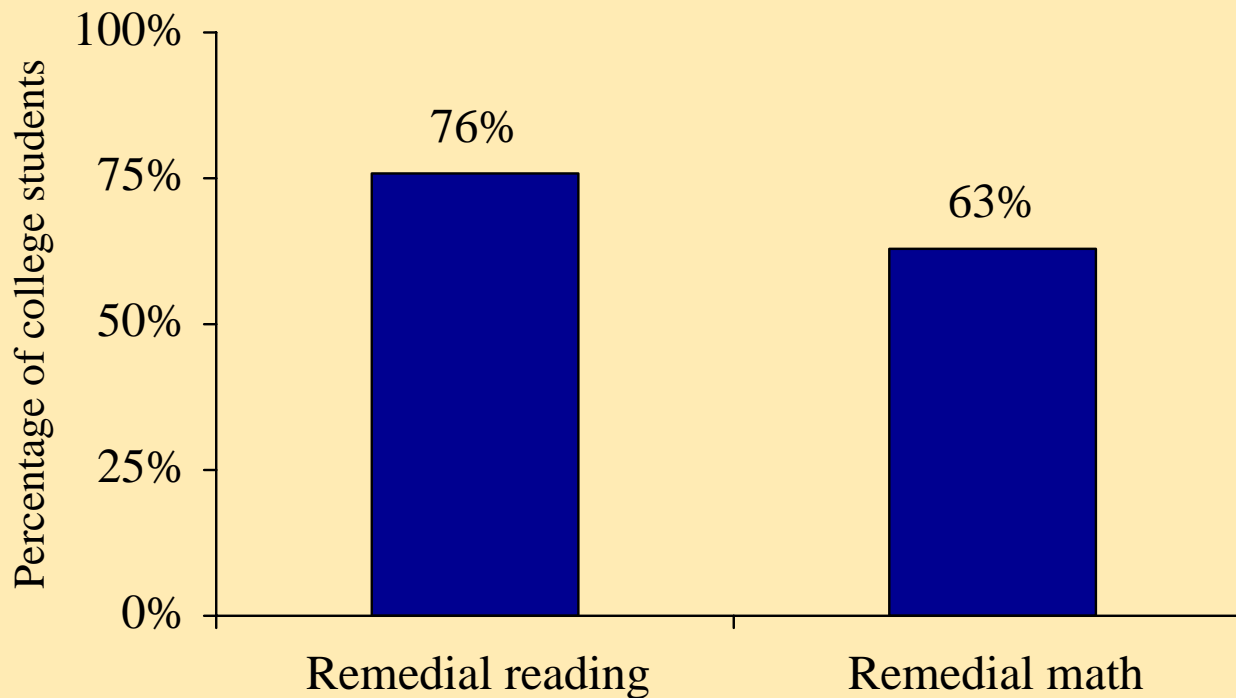


■ Nearly three in 10 first-year students are placed immediately into a remedial college course.

Source: National Center for Education Statistics, *Remedial Education at Degree-Granting Postsecondary Institutions in Fall 2000, 2003*.

Most U.S. college students who take remedial courses fail to earn degrees

Percentage not earning degree by type of remedial coursework



- Many college students who need remediation, especially in reading and math, do not earn either an associate's or a bachelor's degree.

Source: National Center for Education Statistics, *The Condition of Education*, 2004.

College graduation rate: U.S. also lags behind most developed countries

	OECD Reporting Country	Graduation Rate (%)
1	Japan	94
2	Turkey	88
3	Ireland	85
4	United Kingdom	83
5	Korea	79
6	Spain	77
7	Finland	75
8	Iceland	73
9	Germany	70

10	Mexico	69
11	Australia	69
12	Denmark	69
13	Netherlands	69
14	United States	66
15	Czech Republic	61
16	Belgium (Fl.)	60
17	Austria	59
18	France	59
19	Sweden	48
20	Italy	42

American Diploma Project

**What does it take to be
prepared for postsecondary
education and work?**

The American Diploma Project

- Partners: Education Trust, Thomas B. Fordham Foundation, National Alliance of Business
- 2 years of research on essential math & English skills
- 2004 report: Benchmarks to be successful in college or work
- Follow up reports: Exit exams (2004), course requirements (2004), poll (2005)

Expectations are the same for both college & “good jobs”

- ADP found high degree of convergence
- The knowledge & skills that high school graduates will need in order to be successful in college are the same as those they will need in order to be successful in a job that
 - pays enough to support a family well above the poverty level,
 - provides benefits, &
 - offers clear pathways for career advancement through further education & training.

ADP expectations ensure high school graduates are prepared to succeed

■ In English, the benchmarks cover:

- Language
- Communication
- Writing
- Research
- Logic
- Informational text
- Media
- Literature

■ In math, the benchmarks cover:

- Number sense and numerical operations
- Algebra
- Geometry
- Data interpretations, statistics and probability
- Math reasoning skills

To be college and work ready, students need to complete a rigorous sequence of courses

To cover the content in the ADP benchmarks, high school graduates need:

■ In math:

- Four courses
- Content equivalent to Algebra I and II, Geometry, and a fourth course such as Statistics or Precalculus

■ In English:

- Four courses
- Content equivalent to four years of grade-level English or higher (i.e., honors or AP English)

Blue-collar jobs require high-level skills

- Requirements for iron workers:
 - Recommended high school courses include Algebra, Geometry and Physics.
- Requirements for electricians:
 - Recommended high school courses include Algebra, Geometry, Trigonometry and Physics.
- Requirements for sheet metal workers:
 - Four or five years of apprenticeship
 - Algebra, Geometry, Trigonometry and technical reading
- Requirements for draftsmen:
 - Recommended high school courses include Geometry and Trigonometry.
 - Draftsmen may wish to seek additional study in mathematics and computer-aided design to keep up with technological progress within the industry.

Sources: American Diploma Project, 2002; The Associated General Contractors of America (AGC) <http://www.agc.org/page.ww?section=About+AGC&name=About+AGC>.

Recommended Math Courses for 16 CTE Career Clusters

Algebra I, Geometry, & Algebra II	Trigonometry, Pre-Calculus, or Statistics		Trigonometry, Pre- Calculus, or Calculus
<ul style="list-style-type: none"> ■ Arts, A/V Technology & Communications 	<ul style="list-style-type: none"> ■ Architecture & Construction ■ Business, Management, & Administration ■ Finance ■ Government & Public Administration ■ Hospitality and Tourism 	<ul style="list-style-type: none"> ■ Human Services ■ Information Technology ■ Manufacturing ■ Marketing, Sales and Service ■ Transportation, Distribution & Logistics 	<ul style="list-style-type: none"> ■ Agriculture, Food & Natural Resources ■ Education & Training ■ Health Science ■ Law, Public Safety, Corrections & Security ■ Science, Technology, Engineering and Mathematics

American Diploma Project

What do we expect of our high school graduates?

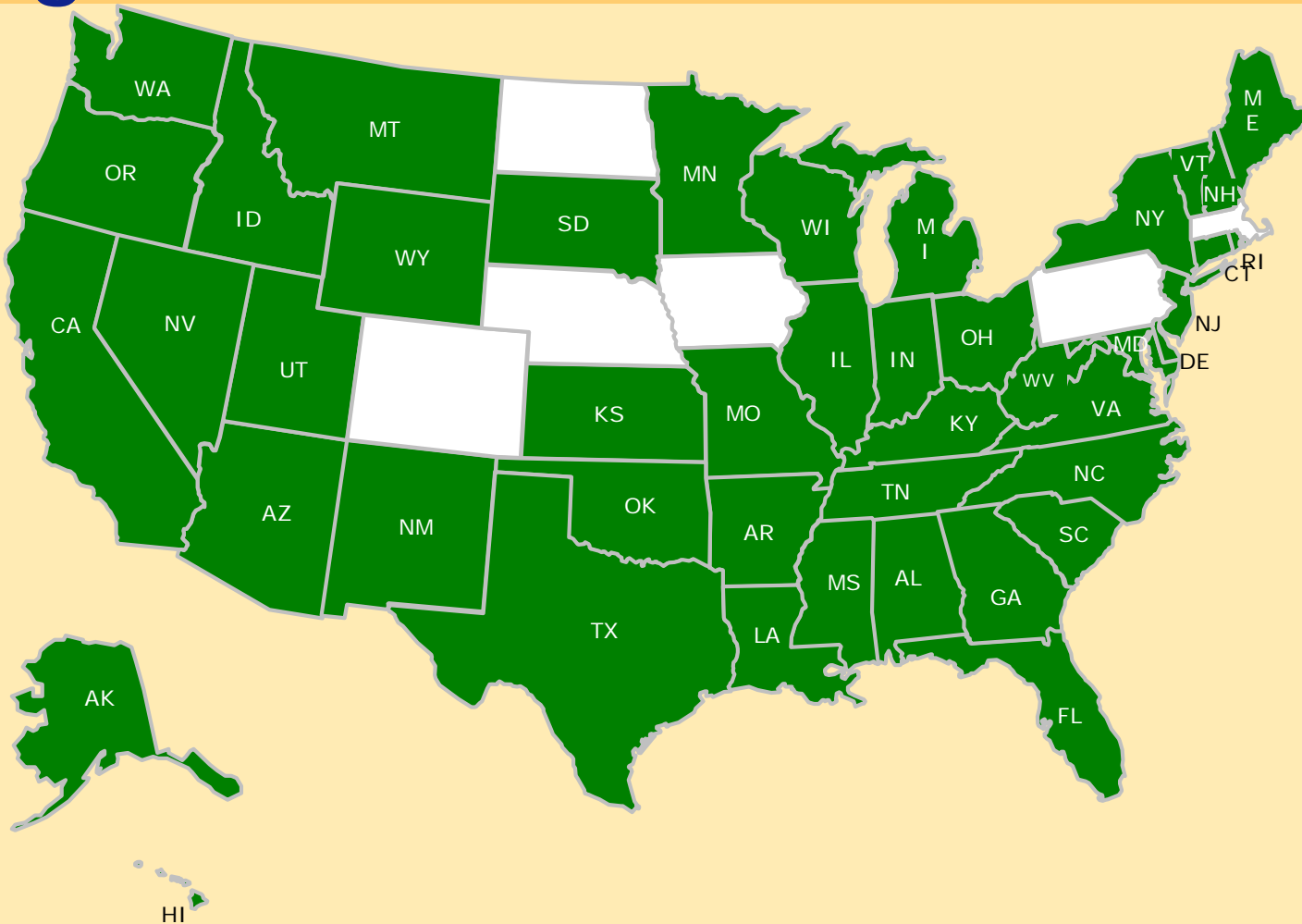
- **Standards**
- **Course-taking requirements**
- **Assessments**

Do state graduation requirements reflect “college- and work-ready” content?

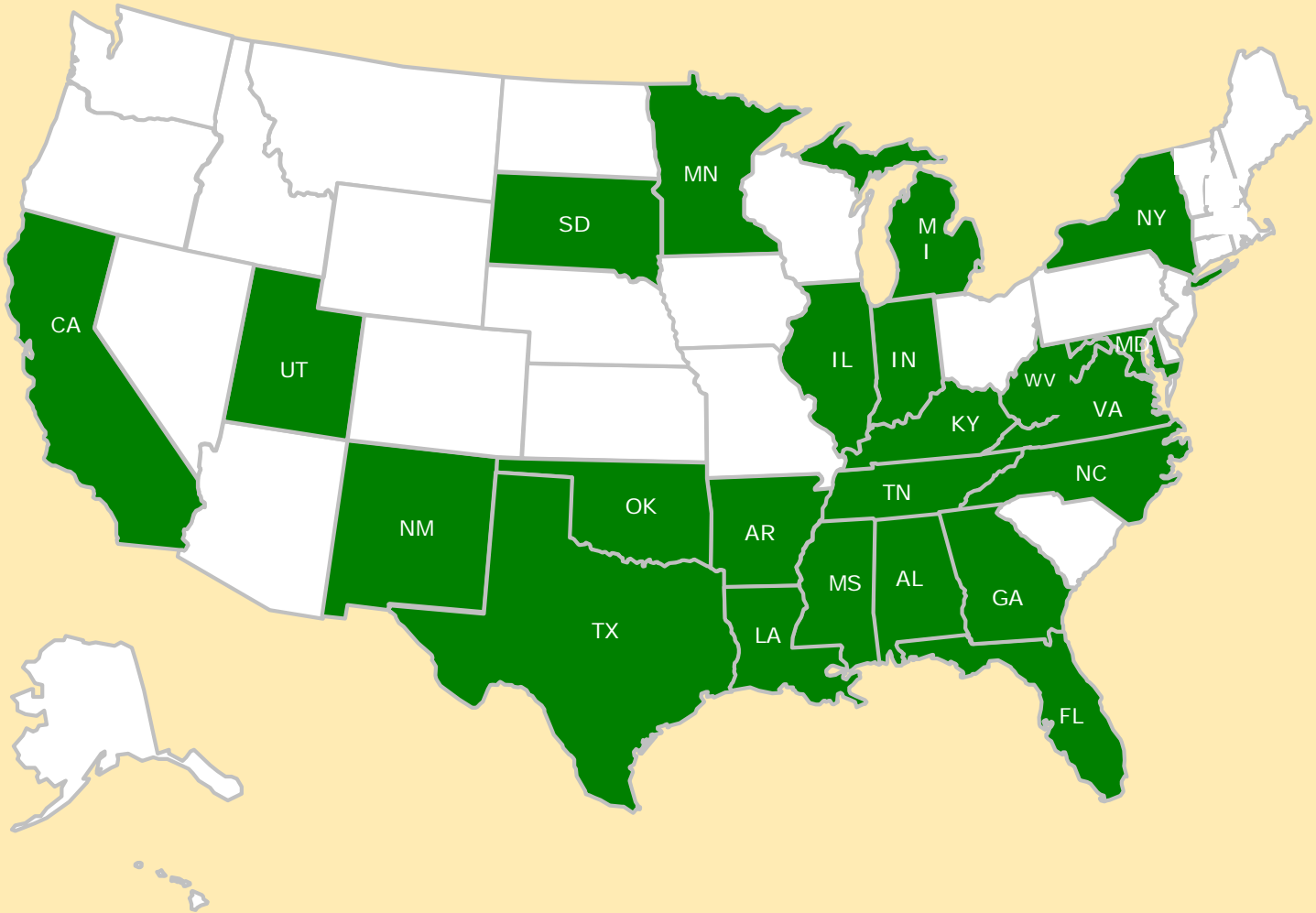
To answer this question, Achieve:

- Reviewed minimum high school course requirements in all 50 states.
- Compared each state’s requirements to what students need to be successful in college and the workplace.

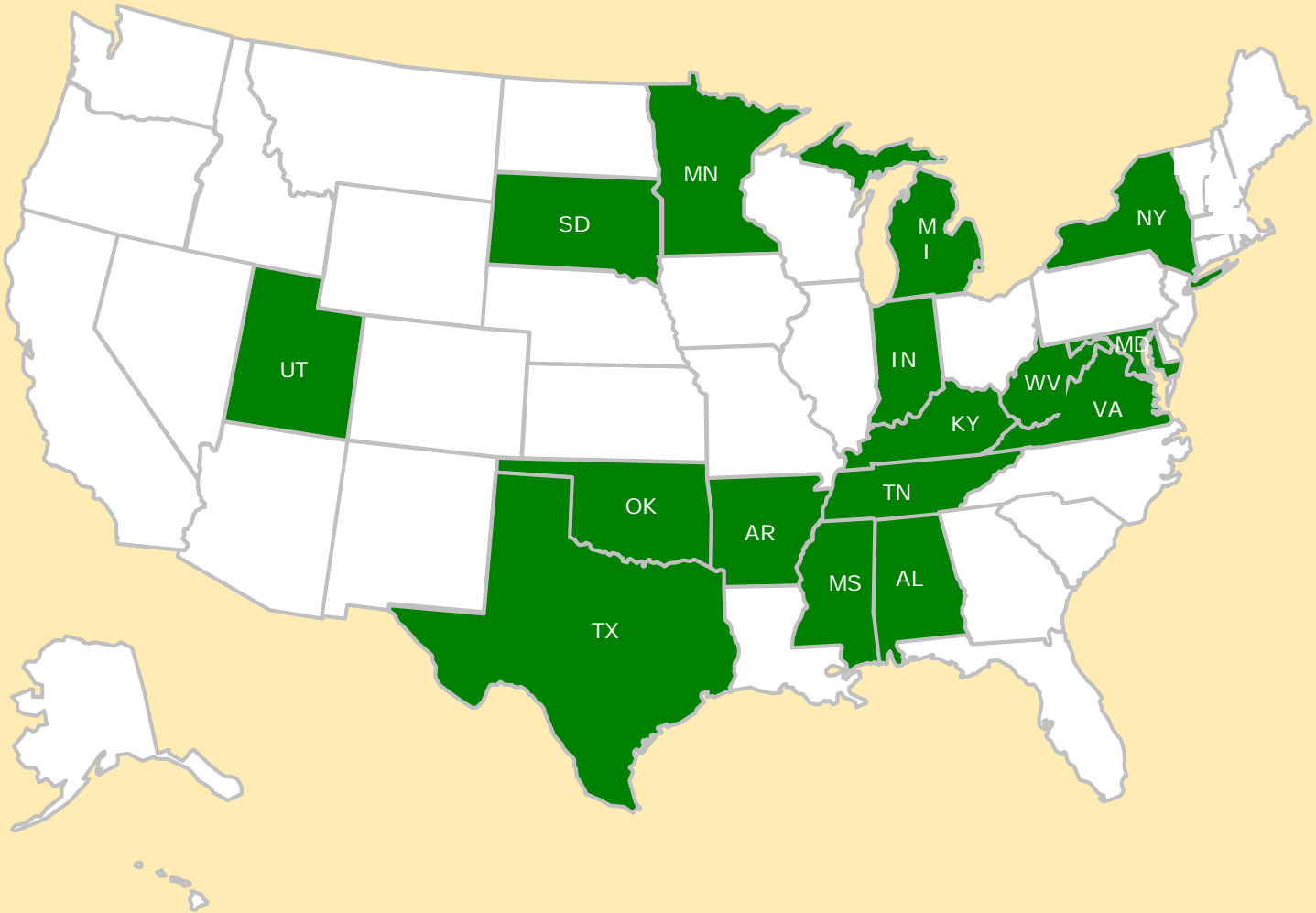
44 states require students to take certain courses to graduate from high school



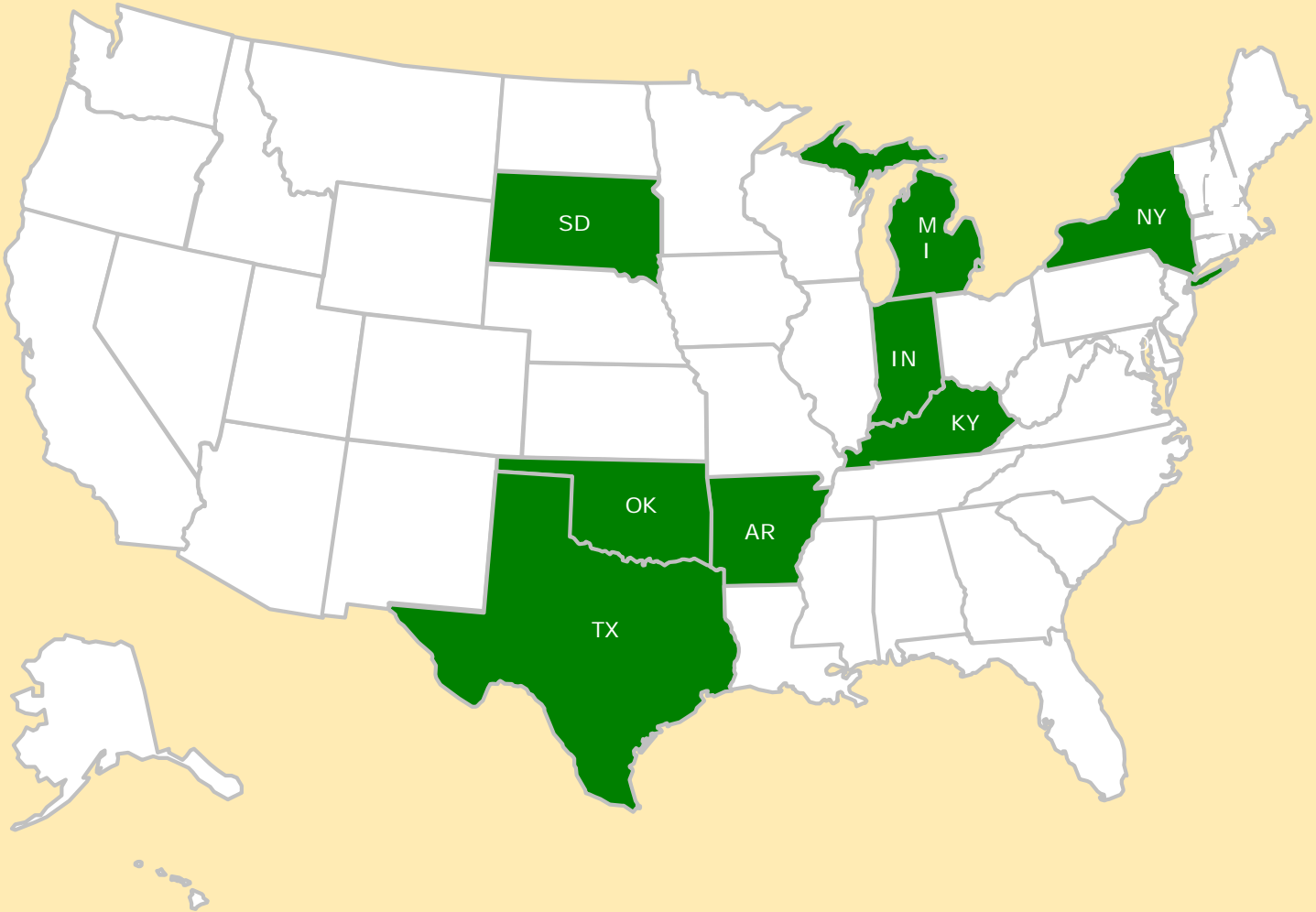
23 states require Algebra I



16 states require Geometry



Only 8 states require Algebra II



California's Graduation Course Requirements

Minimum requirements

■ Math:

- *Two years*
 - ◆ Algebra I

■ English:

- *Three years*, unspecified

A-G Curriculum

■ Math:

- *Three years* of college preparatory mathematics are required (*four years* are strongly recommended).
 - ◆ Elementary Algebra
 - ◆ Geometry (two- and three-dimensional)
 - ◆ Advanced Algebra

■ English:

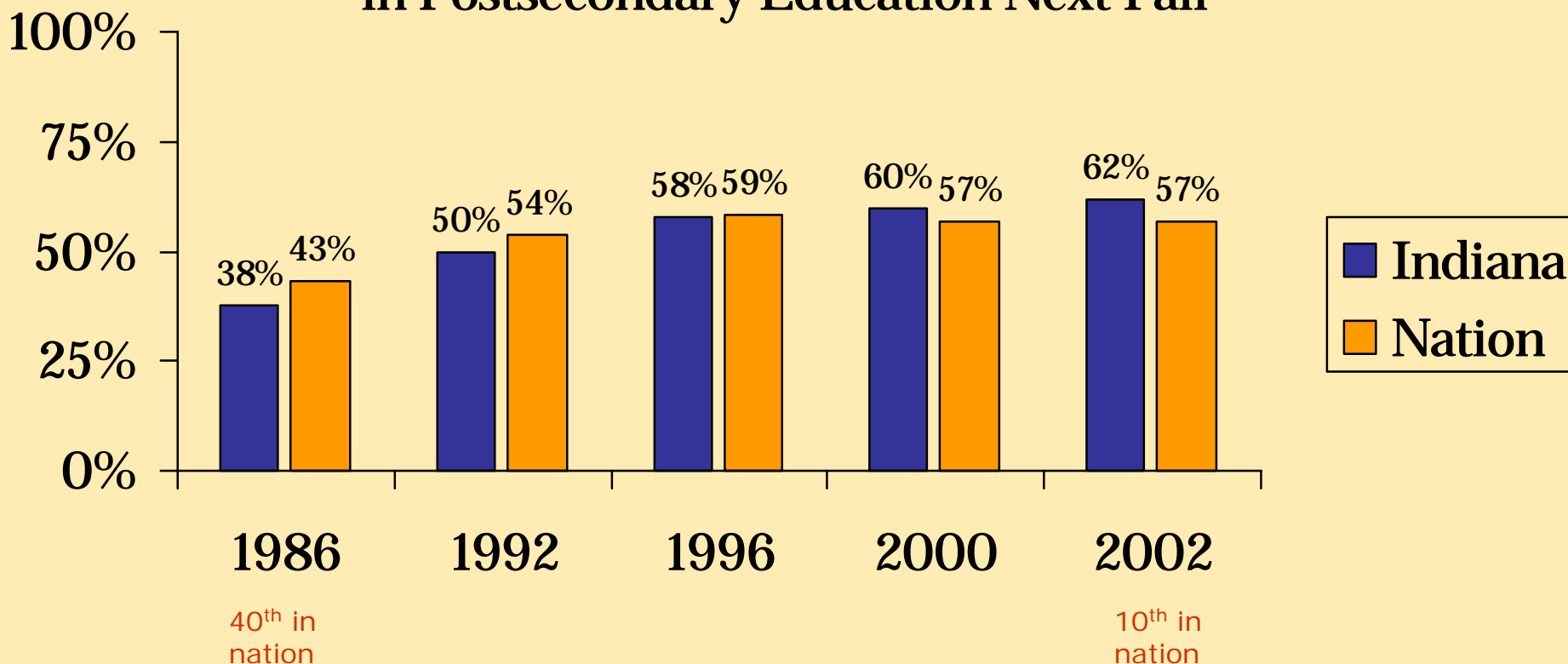
- *Four years* of college preparatory composition and literature are required. Both reading and writing components must be included in the courses.

How do these diplomas compare?

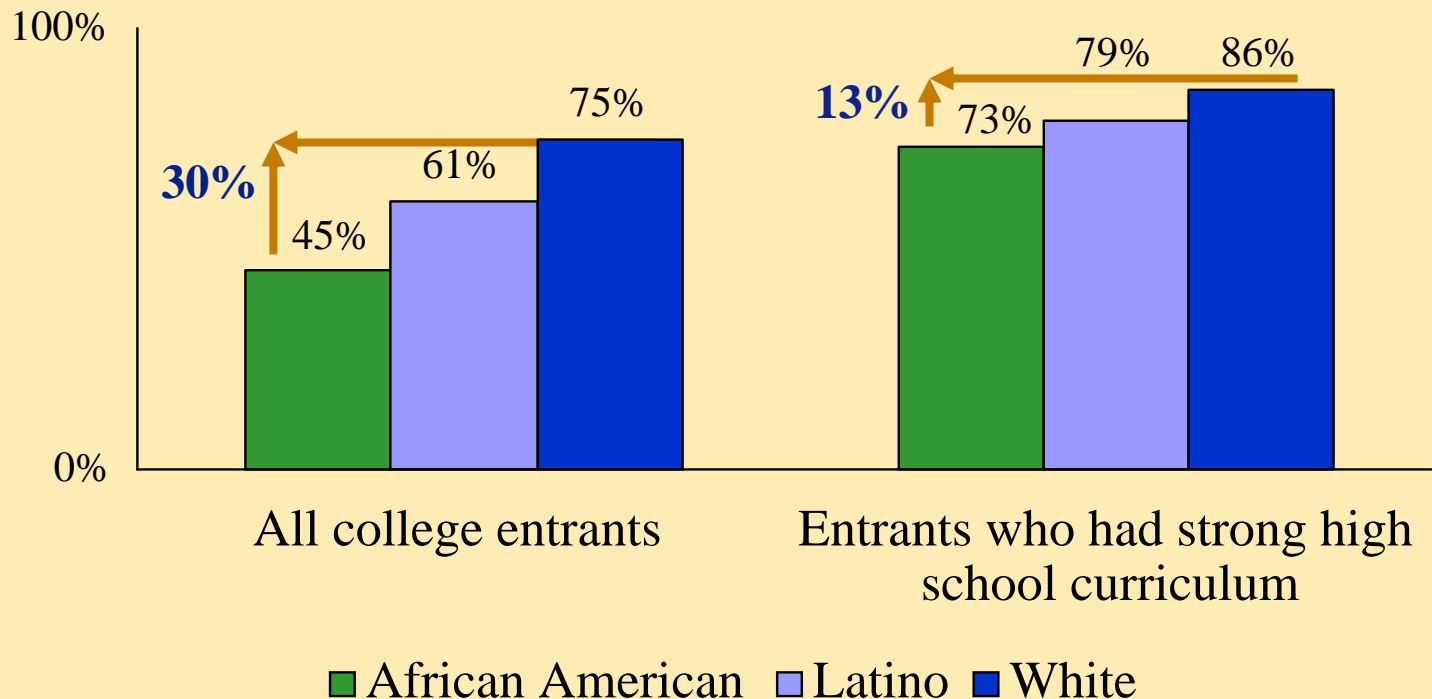
New ADP-Like Graduation Math Requirements	Required Years	Algebra I	Geometry	Algebra II
American Diploma Project	4	✓	✓	✓
Texas Recommended H.S. Program	4	✓	✓	✓
Arkansas Smart Core	4	✓	✓	✓
Indiana Core 40 Diploma	3	✓	✓	✓
South Dakota Advanced H.S. Program	3	✓	✓	✓
Oklahoma College Prep Curriculum	3	✓	✓	✓
New York Regents Diploma	3	✓	✓	✓
Kentucky H.S. Diploma	3	✓	✓	✓
Michigan Merit Core	4	✓	✓	✓

Indiana's Core 40: more challenging courses yield results

High School Graduates Enrolling
in Postsecondary Education Next Fall



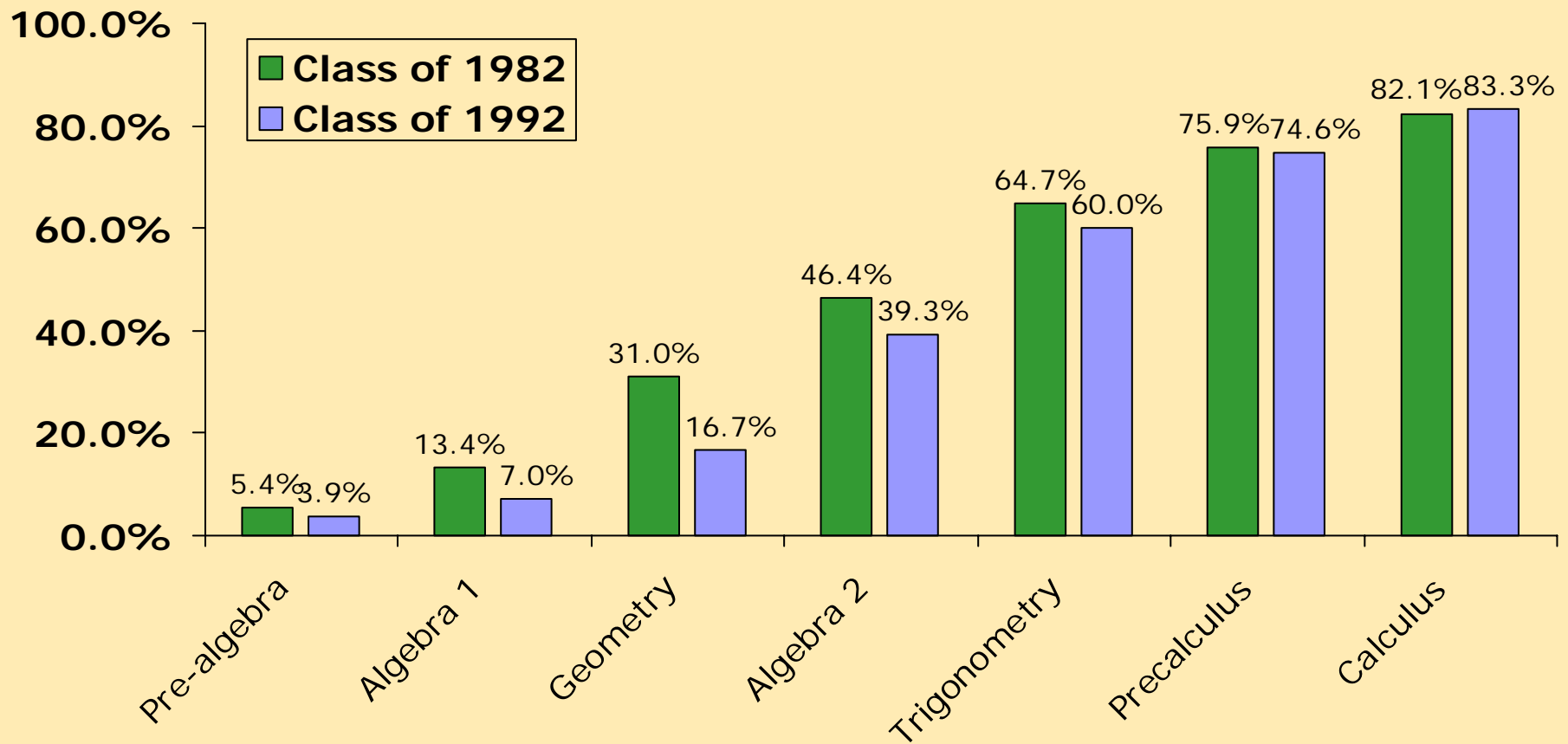
A strong high school curriculum* improves college completion and narrows gaps



*Completing at least Algebra II plus other courses.

Source: Adapted from Adelman, Clifford, U.S. Department of Education, *Answers in the Toolbox*, 1999.

Bachelor's degree attainment by highest level of math reached: High school class of 1982 & 1992



San Jose Unified School District California

Large, diverse school system

- 31,874 students
 - 40% low-income
 - 50% Latino
 - 15% Asian
 - 29% White

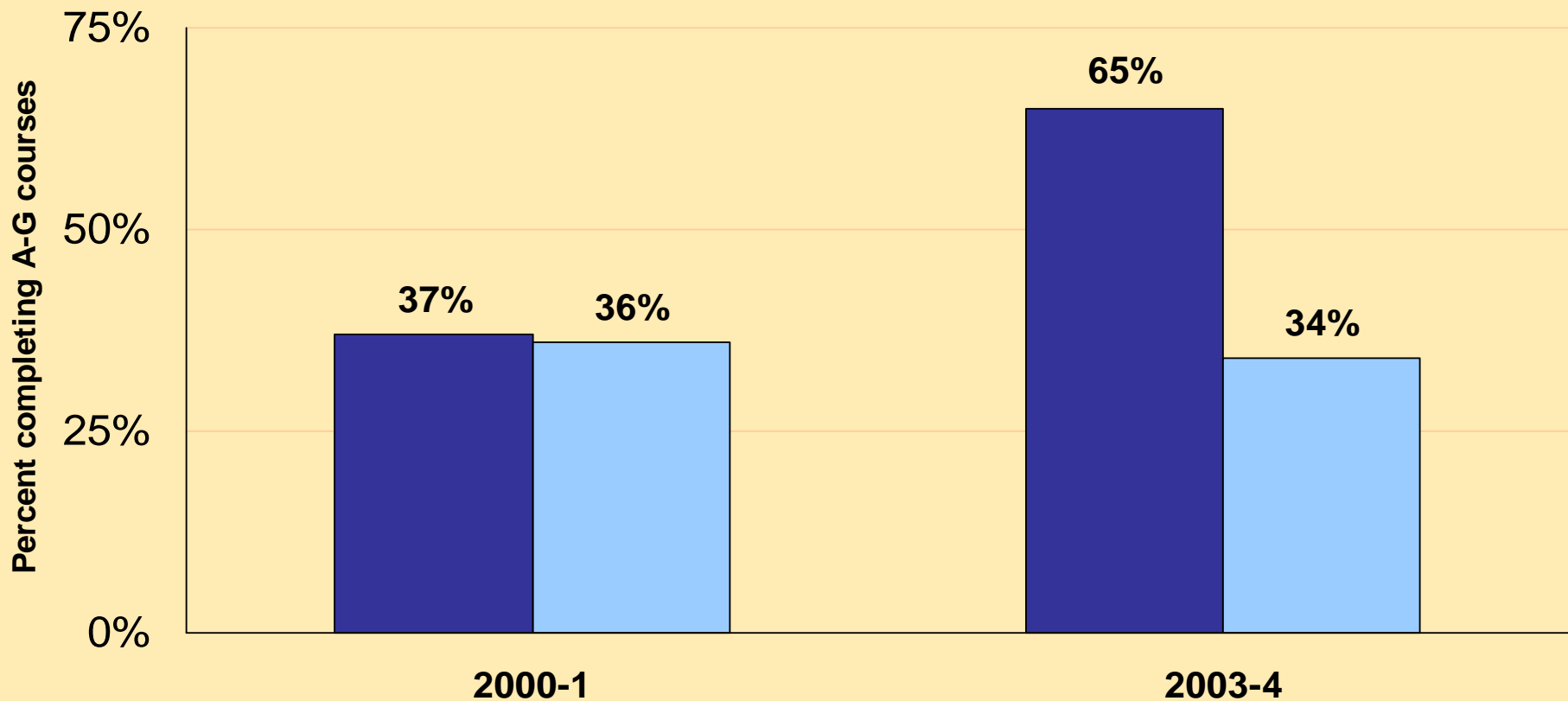
Source: California Department of Education, Data Quest, <http://data1.cde.ca.gov/dataquest/>

San Jose Unified School District California

- In 2001, San Jose required all students to complete a rigorous curriculum for high school graduation.
 - The “A-G Curriculum” is a sequence of 15 courses (with 3 more recommended) defined by the state.
 - The A-G Curriculum is required for entry into any campus of the California State University and University of California systems.
 - Only 4 in 10 students in all of California completed the A-G Curriculum in 2005.

San Jose Unified School District Many More Grads Now Complete A-G

■ San Jose USD ■ State



Source: California Department of Education, DataQuest Web site, <http://data1.cde.ca.gov/dataquest/>.

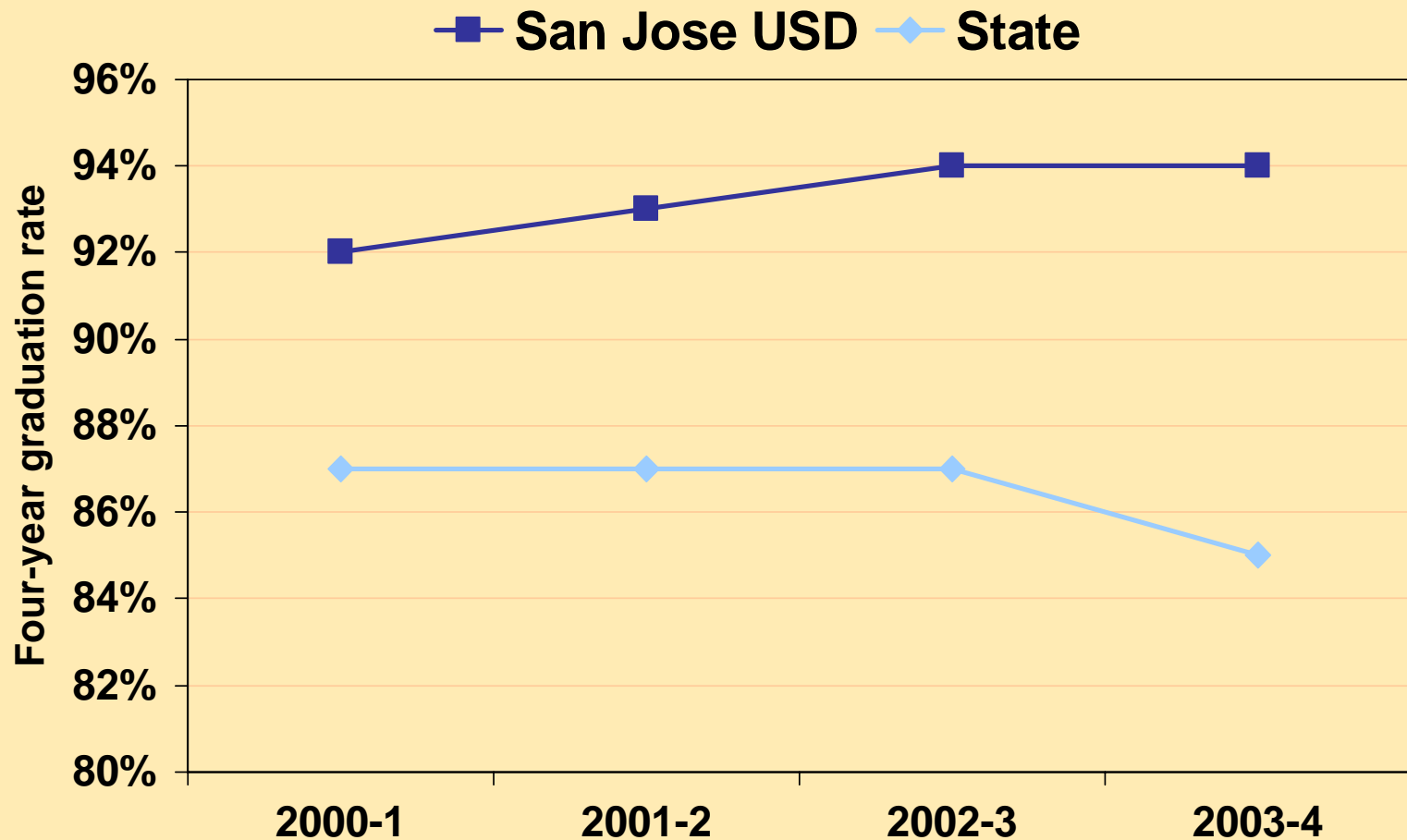
San Jose Unified School District

Minority Students More Successful

- 45% of the Hispanic graduates are university eligible right out of high school compared to 22% statewide.
- Enrollment of Hispanic students in Advanced Placement courses has more than doubled.

Source: San Jose Unified School District's Report to the Community (Fall 2005)

San Jose Unified School District Graduation Rates Have Not Declined



Source: California Department of Education, DataQuest Web site, <http://data1.cde.ca.gov/dataquest/>.

Do assessments measure “college-ready” skills?

- Half the states require students to pass one or more exams to earn a high school diploma.

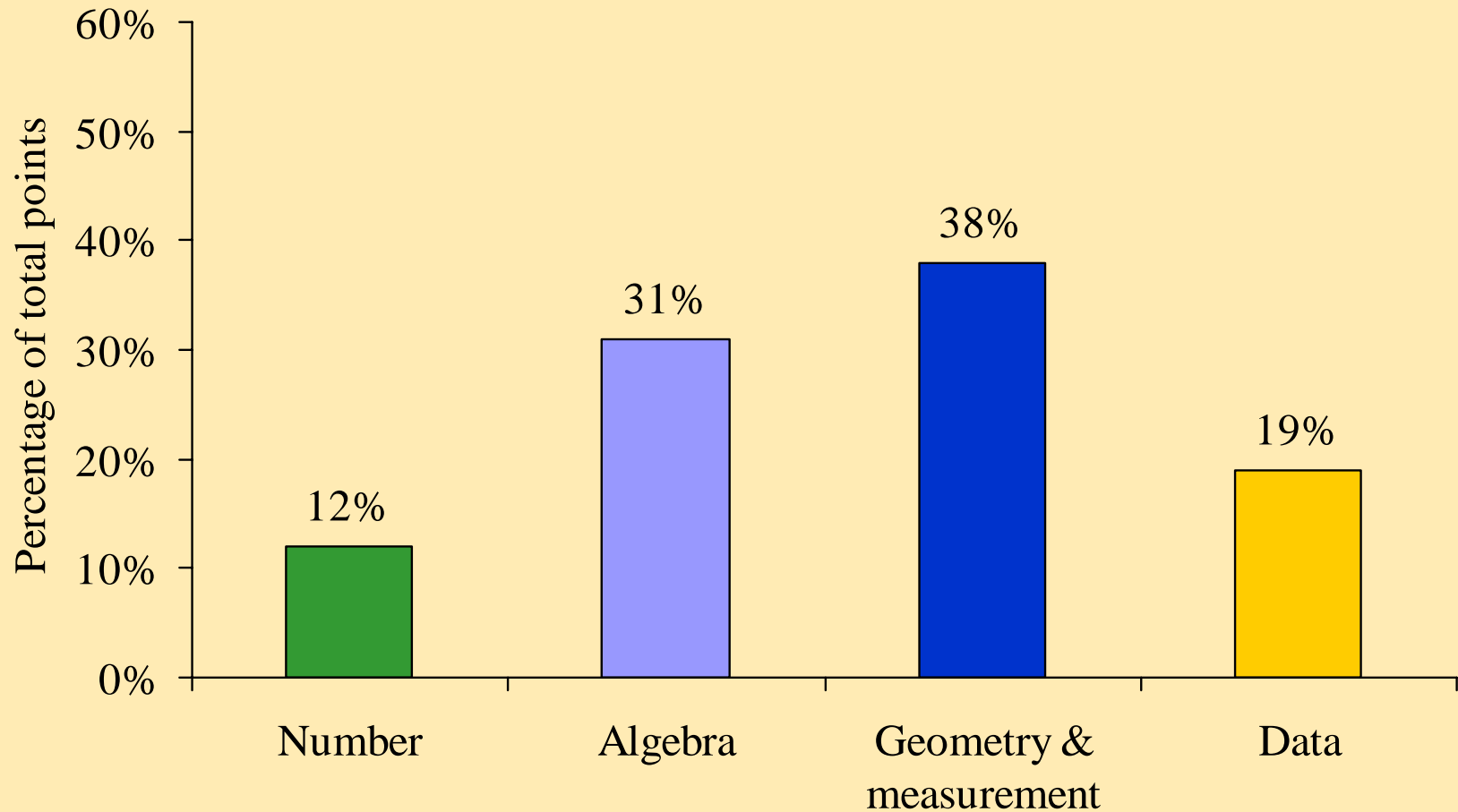
What does it take to pass these tests?

The tests Achieve analyzed

State	Grade Given	Reading	Writing	Math	First Graduating Class Facing Requirement
Florida	10th	•		•	2003
Maryland	End of course	•	•	•	2009
Massachusetts	10th	•	•	•	2003
New Jersey	11th	•	•	•	2003
Ohio	10th	•		•	2007
Texas	11th	•	•	•	2004

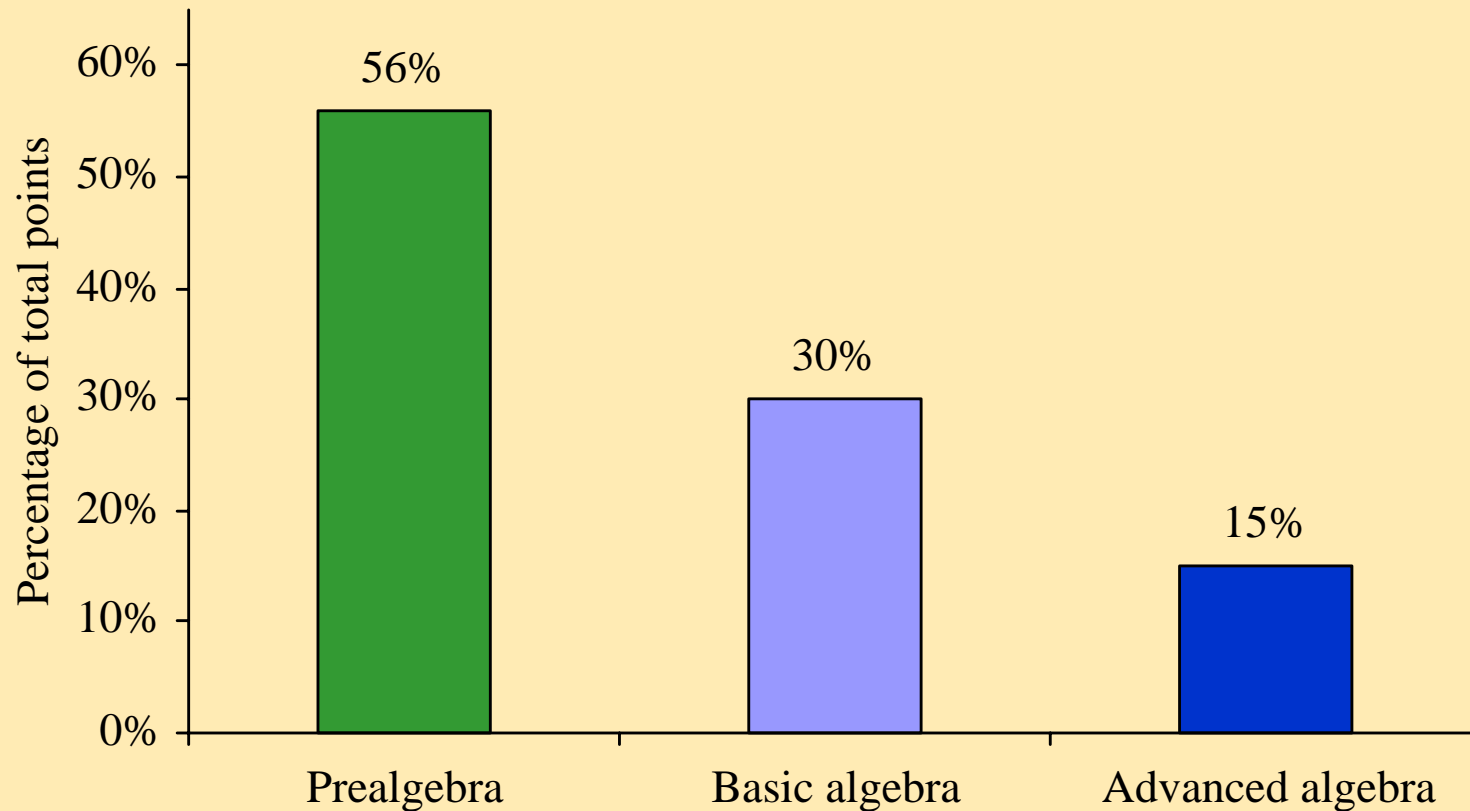
Source: Achieve, Inc., *Do Graduation Tests Measure Up? A Closer Look at State High School Exit Exams*, 2004.

Good news: States are measuring algebra and geometry



Source: Achieve, Inc., *Do Graduation Tests Measure Up? A Closer Look at State High School Exit Exams*, 2004.

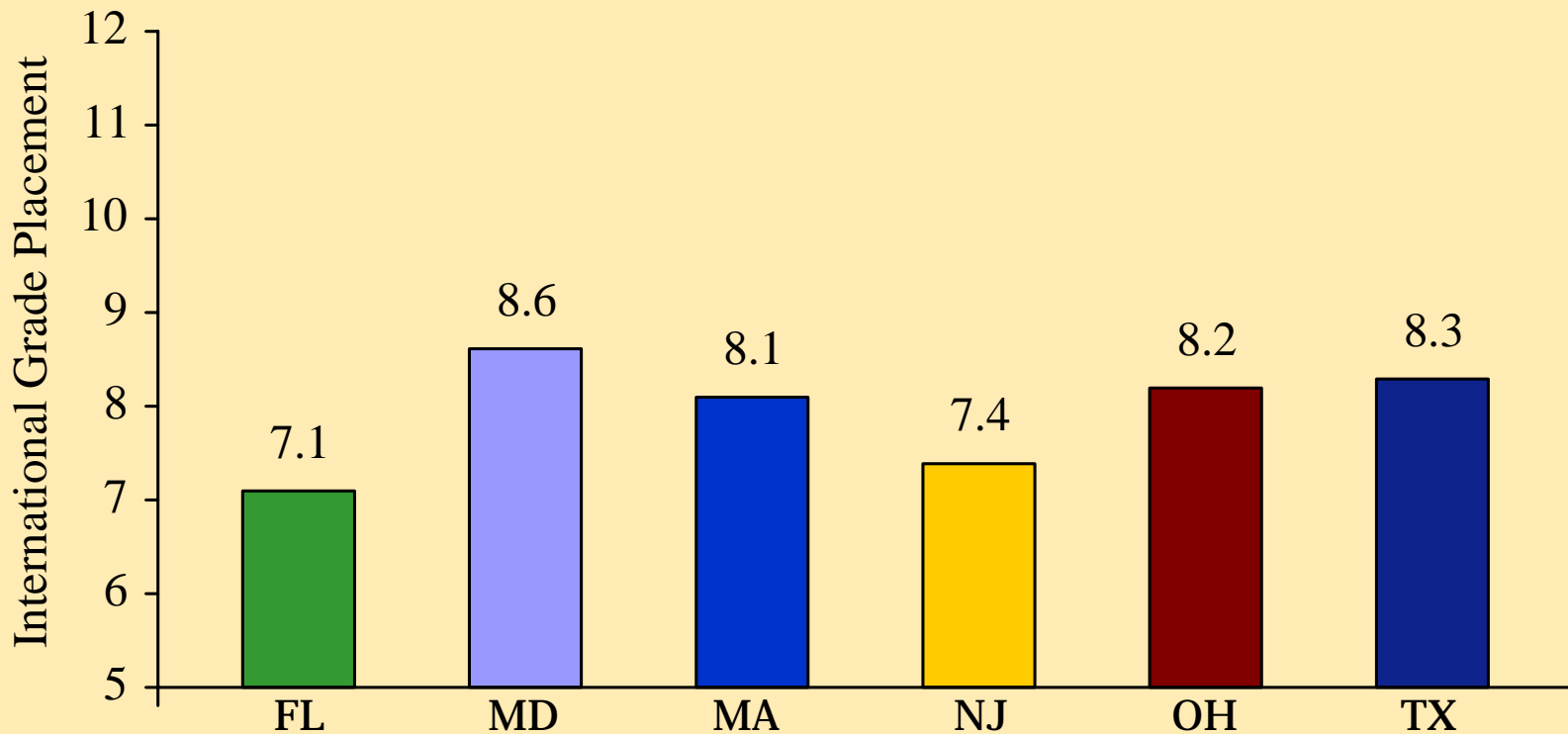
Bad news: States tend to measure lower-level content



Source: Achieve, Inc., *Do Graduation Tests Measure Up? A Closer Look at State High School Exit Exams*, 2004.

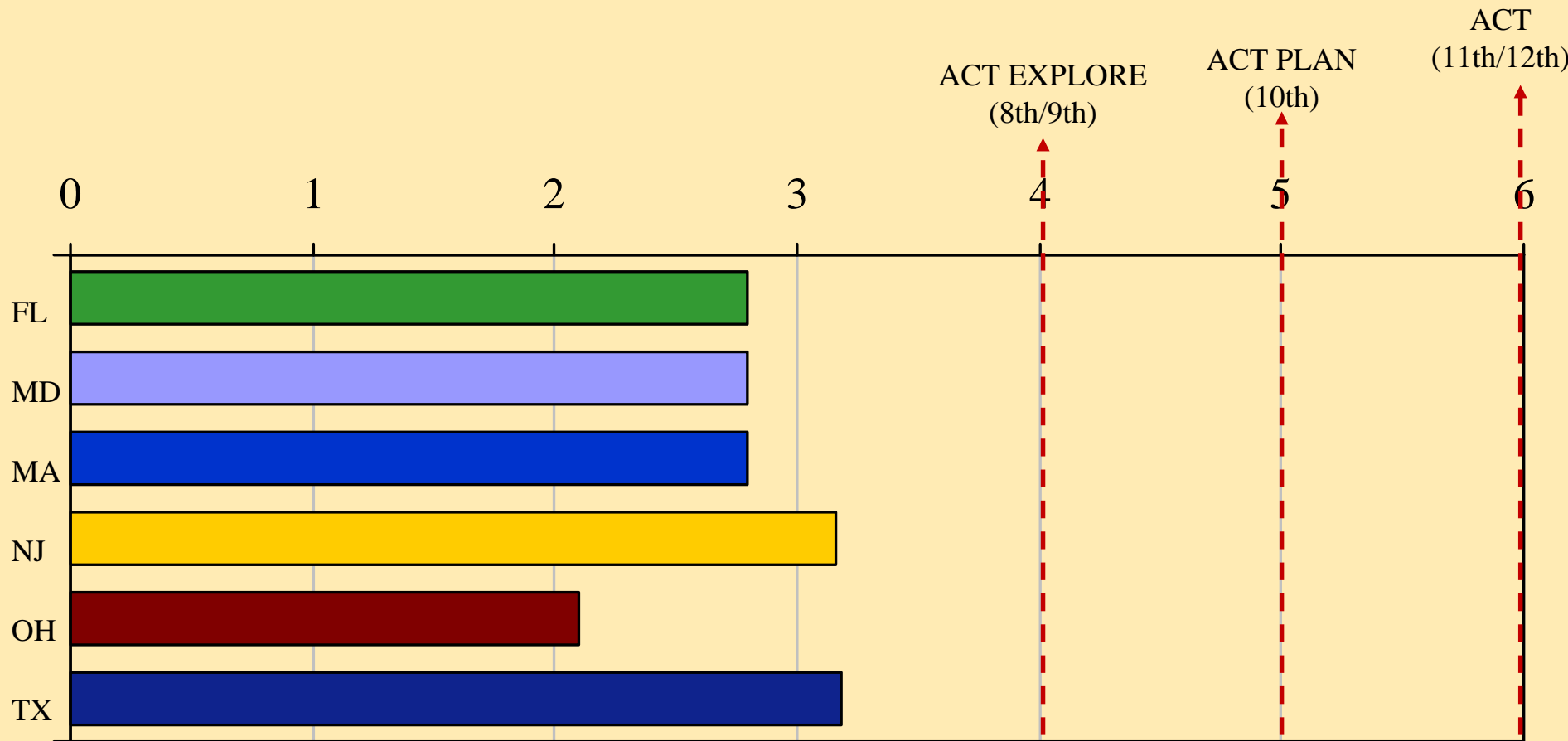
Students can pass state math tests knowing content typically taught in 7th and 8th grade internationally

Grade when most international students cover content required to pass state math tests



Source: Achieve, Inc., *Do Graduation Tests Measure Up? A Closer Look at State High School Exit Exams*, 2004.

Students can pass state English tests with skills ACT expects of 8th and 9th graders



Source: Achieve, Inc., *Do Graduation Tests Measure Up? A Closer Look at State High School Exit Exams*, 2004.

Expectation Gap

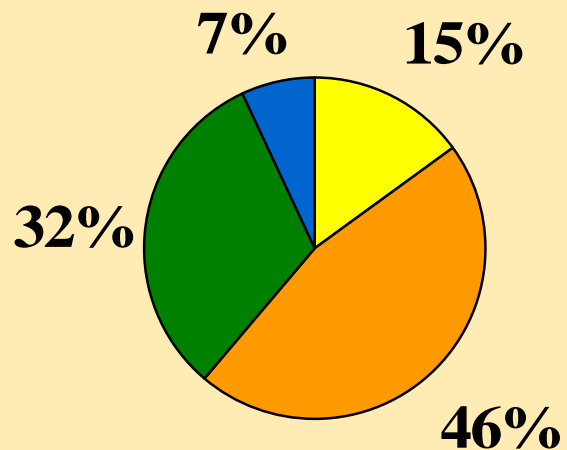
- In nearly every state, students can earn a high school diploma without the skills necessary for success in college and work.

American Diploma Project

What do recent high school graduates tell us about the expectations they faced?

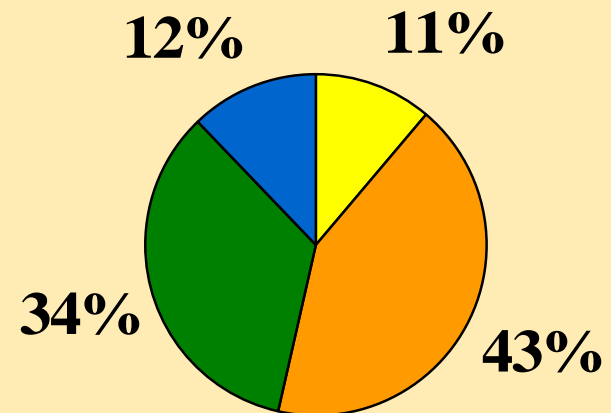
Many high school graduates cite gaps in preparation

How well did your high school education prepare you for college or the work/jobs you hope to get in the future?



High school graduates who went to college

Extremely well Very well
Somewhat well Not well



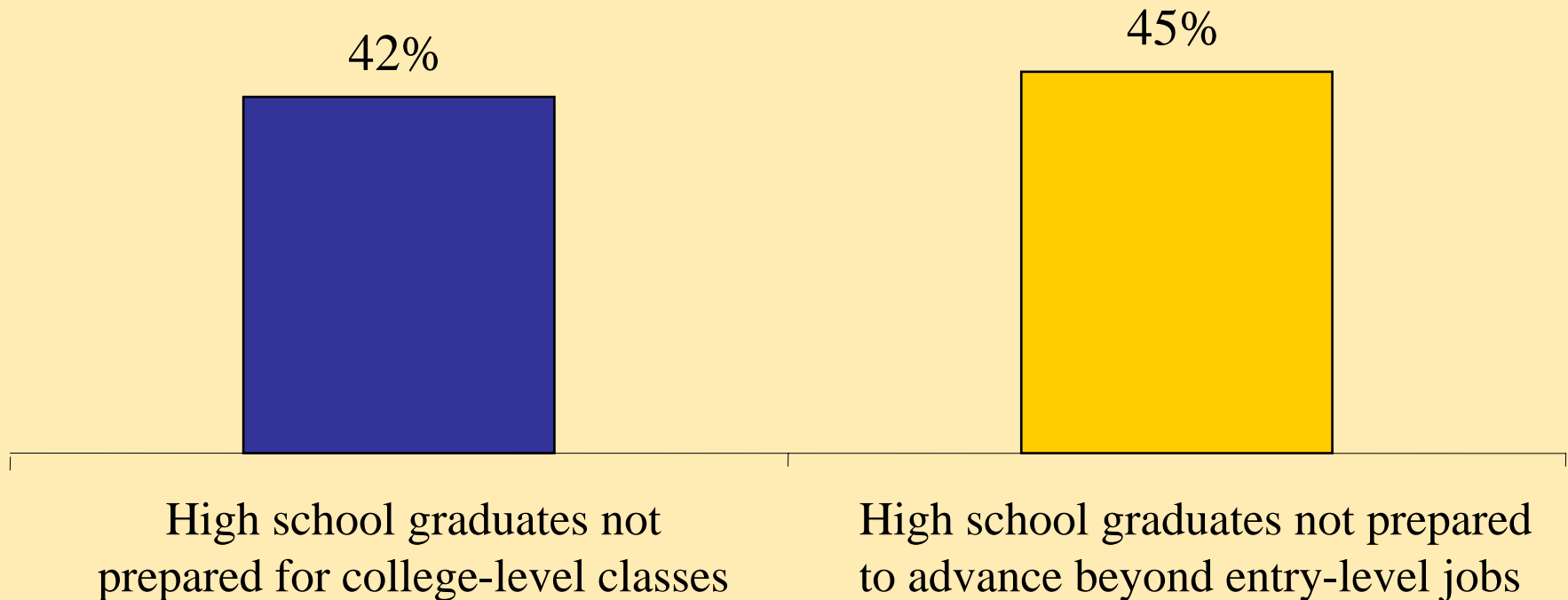
High school graduates who did NOT go to college

Extremely well Very well
Somewhat well Not well

Source: Peter D. Hart Research Associates/Public Opinion Strategies, *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* prepared for Achieve, Inc., 2005.

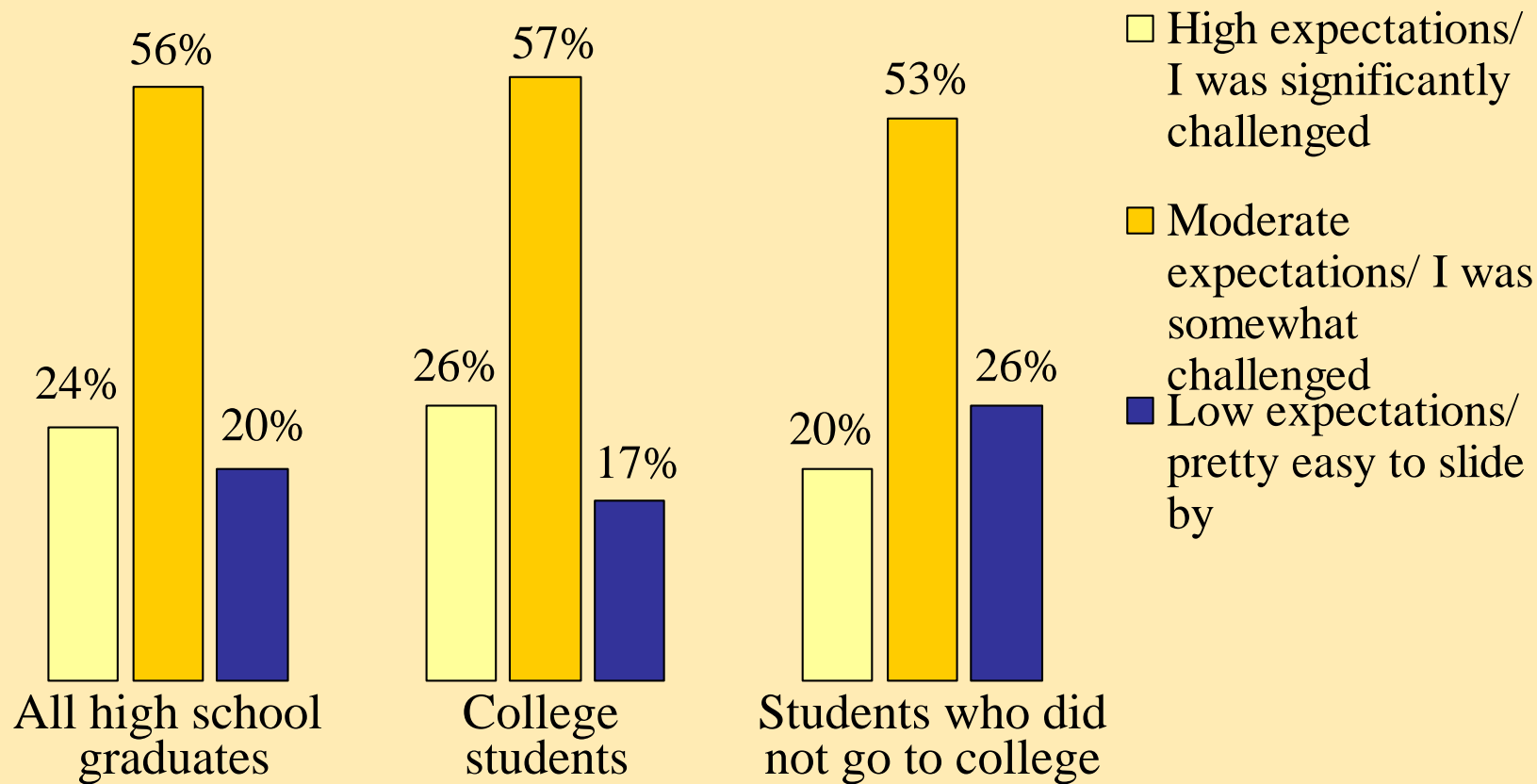
College instructors/employers confirm high school graduates' lack of preparation

Average estimated proportions of recent high school graduates who are not prepared



Source: Peter D. Hart Research Associates/Public Opinion Strategies, *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* prepared for Achieve, Inc., 2005.

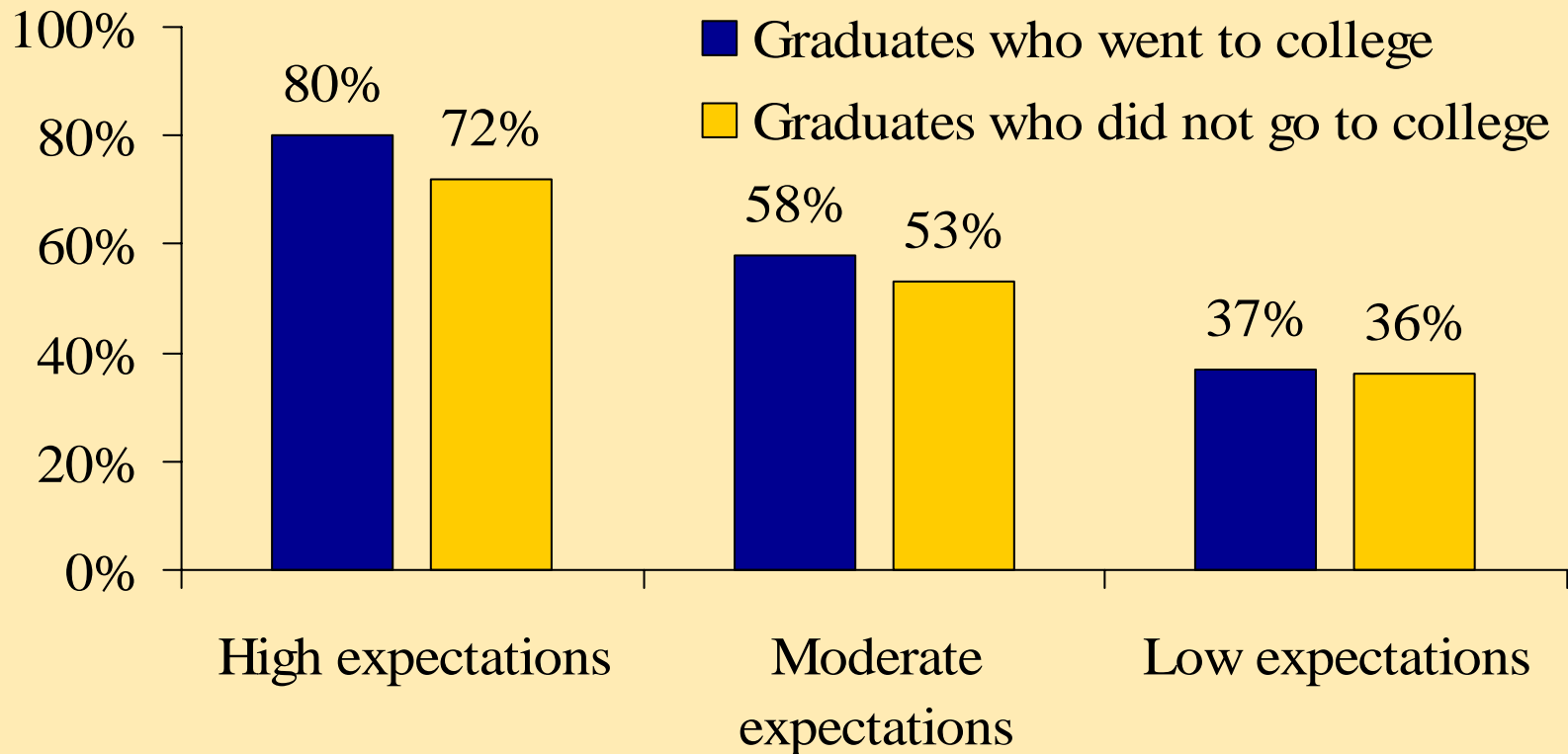
Most high school graduates were moderately challenged



Source: Peter D. Hart Research Associates/Public Opinion Strategies, *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* prepared for Achieve, Inc., 2005.

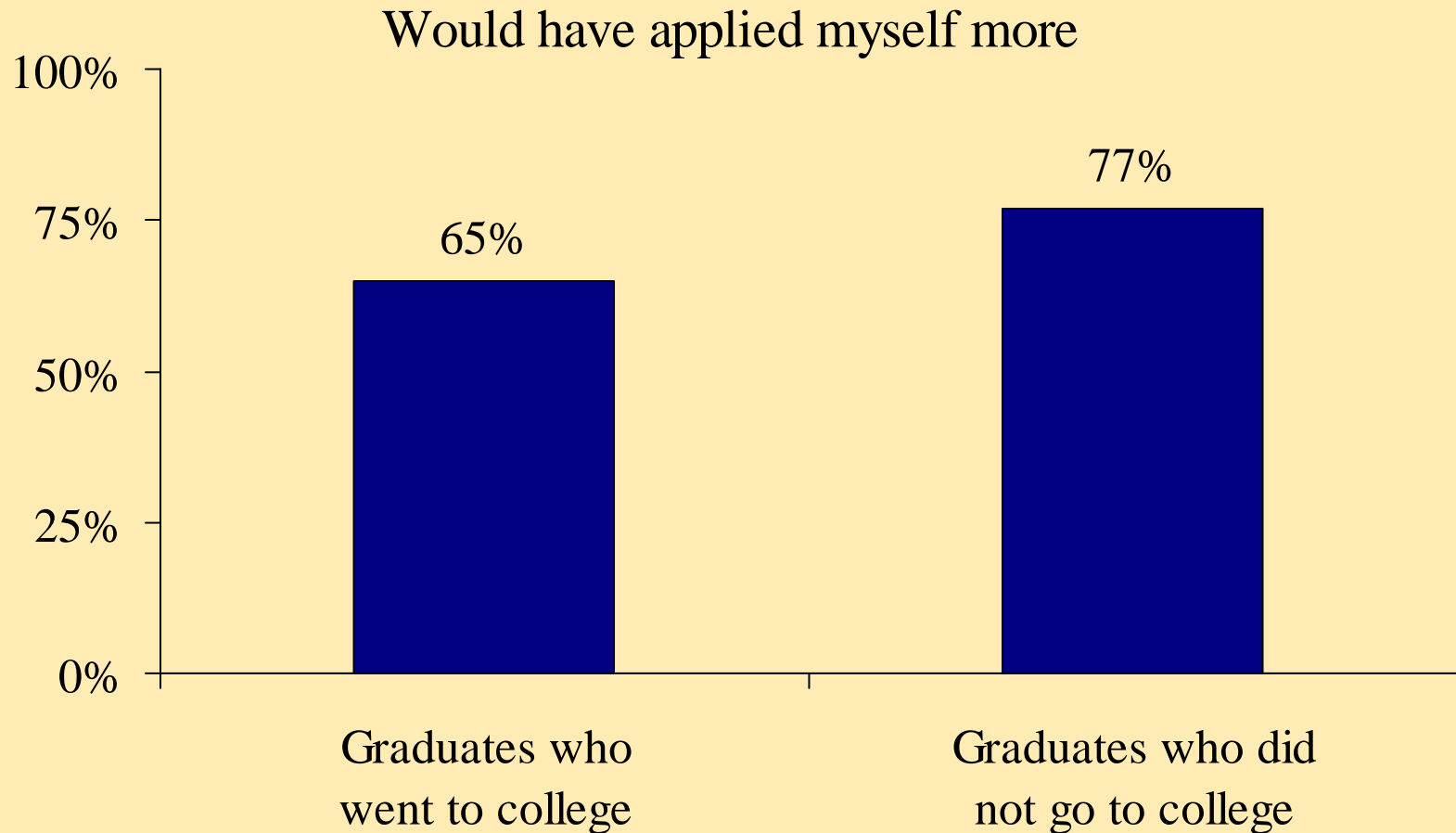
Graduates who faced high expectations in high school twice as likely to feel prepared for future

Percentage saying they were extremely/very well prepared



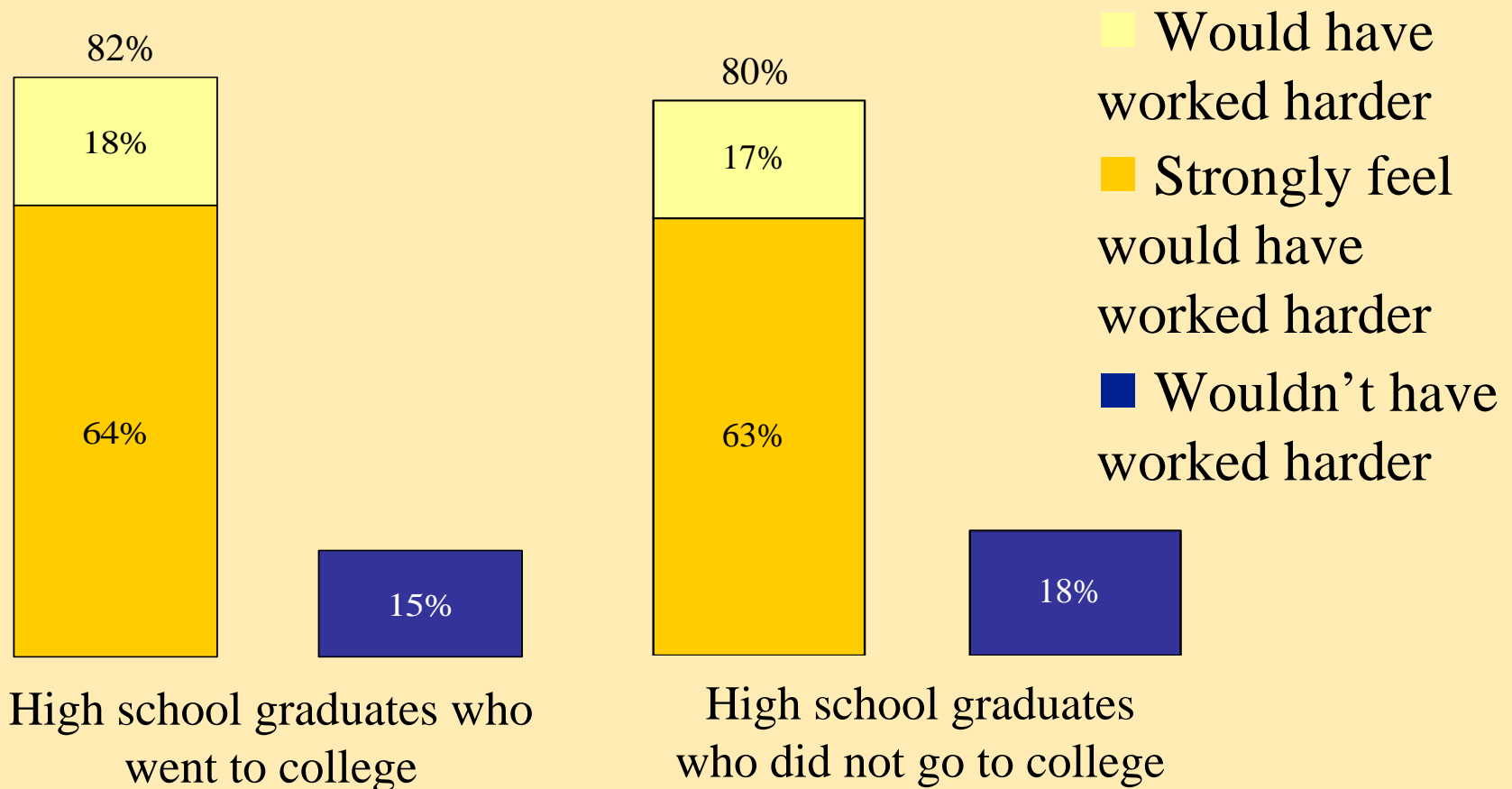
Source: Peter D. Hart Research Associates/Public Opinion Strategies, *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* prepared for Achieve, Inc., 2005.

Knowing what they know today, high school graduates would have worked harder



Source: Peter D. Hart Research Associates/Public Opinion Strategies, *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* prepared for Achieve, Inc., 2005.

If high school had demanded more, graduates would have worked harder



Source: Peter D. Hart Research Associates/Public Opinion Strategies, *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* prepared for Achieve, Inc., 2005.

Majority of graduates would have taken harder courses

Knowing what you know today about the expectations of college/work ...

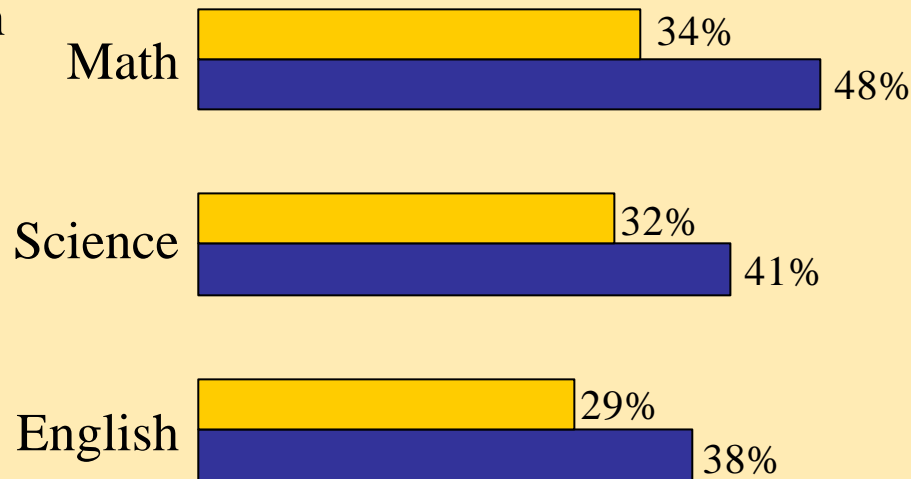
Would have taken more challenging courses in at least one area

■ College students

■ Students who did not go to college



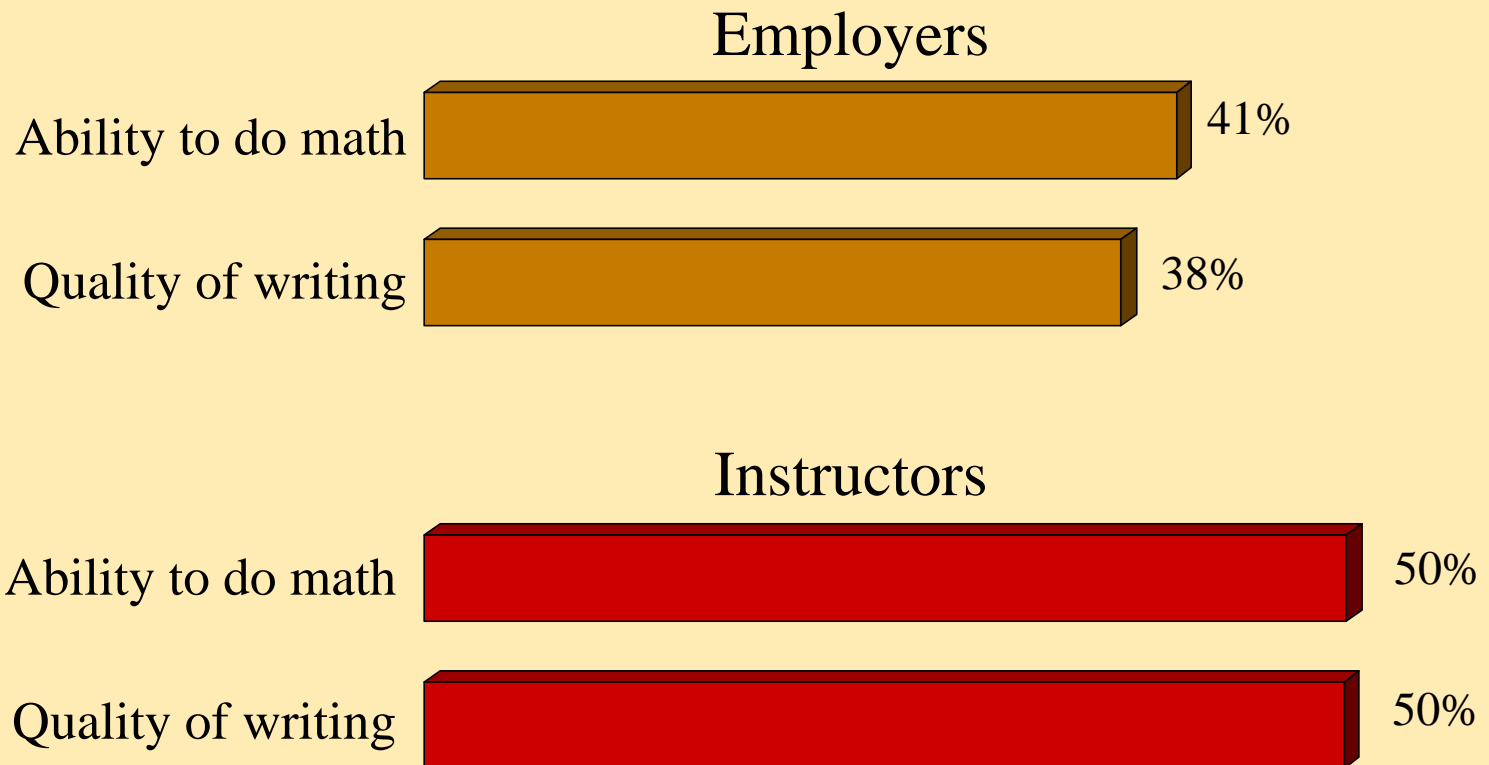
Would have taken more challenging courses in:



Source: Peter D. Hart Research Associates/Public Opinion Strategies, *Rising to the Challenge: Are High School Graduates Prepared for College and Work?* prepared for Achieve, Inc., 2005.

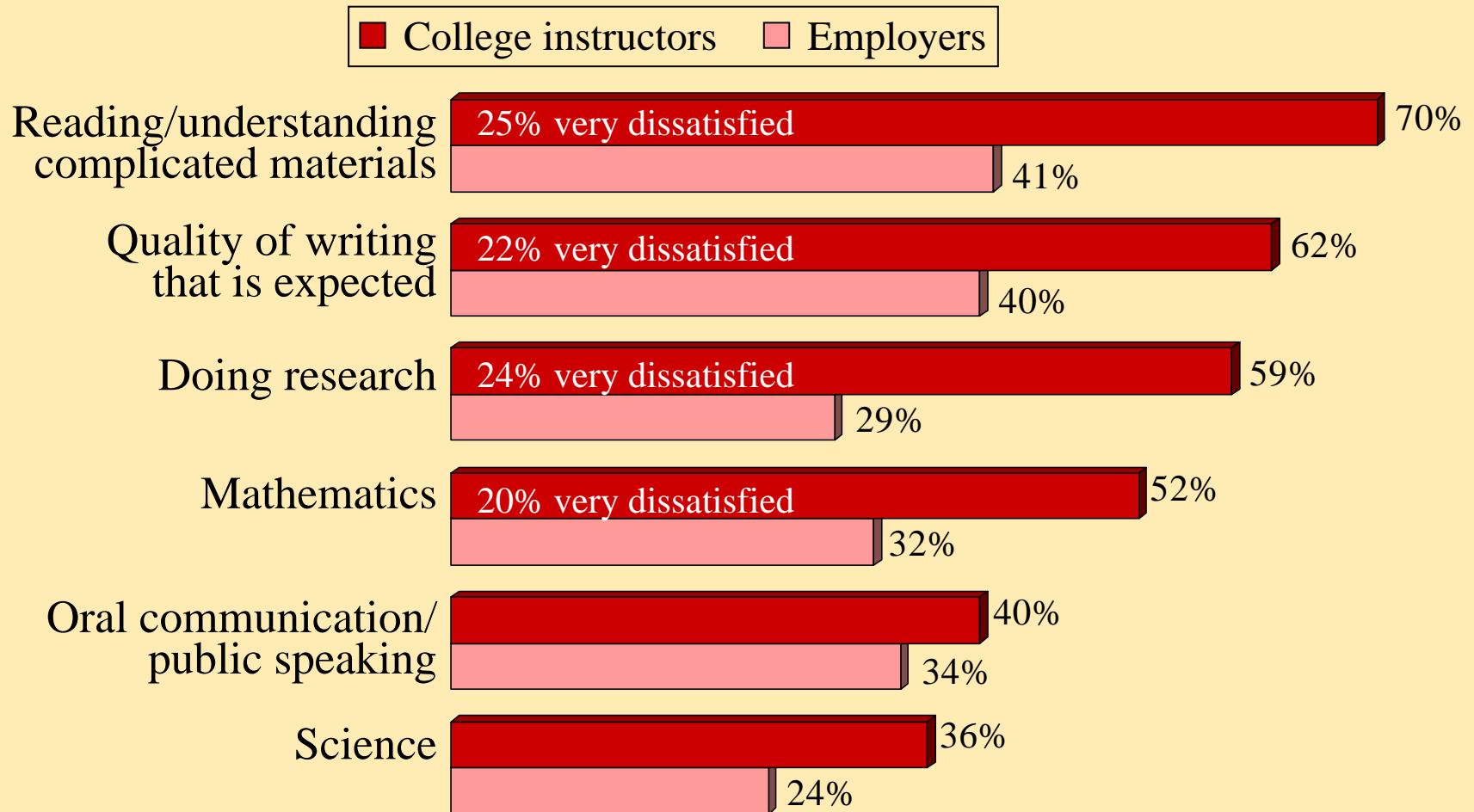
Employers/College Instructors Say Many Not Prepared In Math/Writing

(Employers'/instructors' average estimates of percentages of public HS graduates NOT prepared in each subject)



Employers/Instructors Dissatisfied With High Schools' Skills Prep

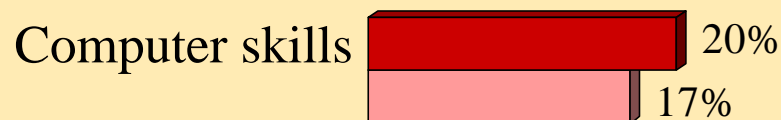
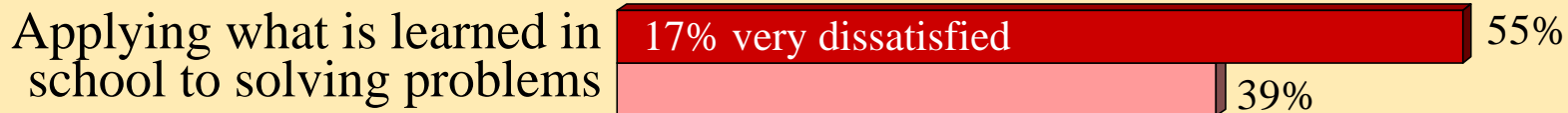
(In each area, % saying they are somewhat/very dissatisfied with the job public high schools are doing preparing graduates)



Employers/Instructors Dissatisfied With High Schools' Skills Prep

(In each area, % saying they are somewhat/very dissatisfied with the job public high schools are doing preparing graduates)

■ College instructors ■ Employers



American Diploma Project

What will it take to close the expectations gap?

Closing the expectations gap requires states to take action

- Align high school standards and assessments with the knowledge and skills required for success in postsecondary education and work.
- Administer a college- and work-ready assessment, aligned to state standards, to high school students so they get clear and timely information and are able to address critical skill deficiencies while still in high school.
- Require all students to take a college- and work-ready curriculum to earn a high school diploma.
- Hold high schools accountable for graduating students who are college ready, and hold postsecondary institutions accountable for their success once enrolled.

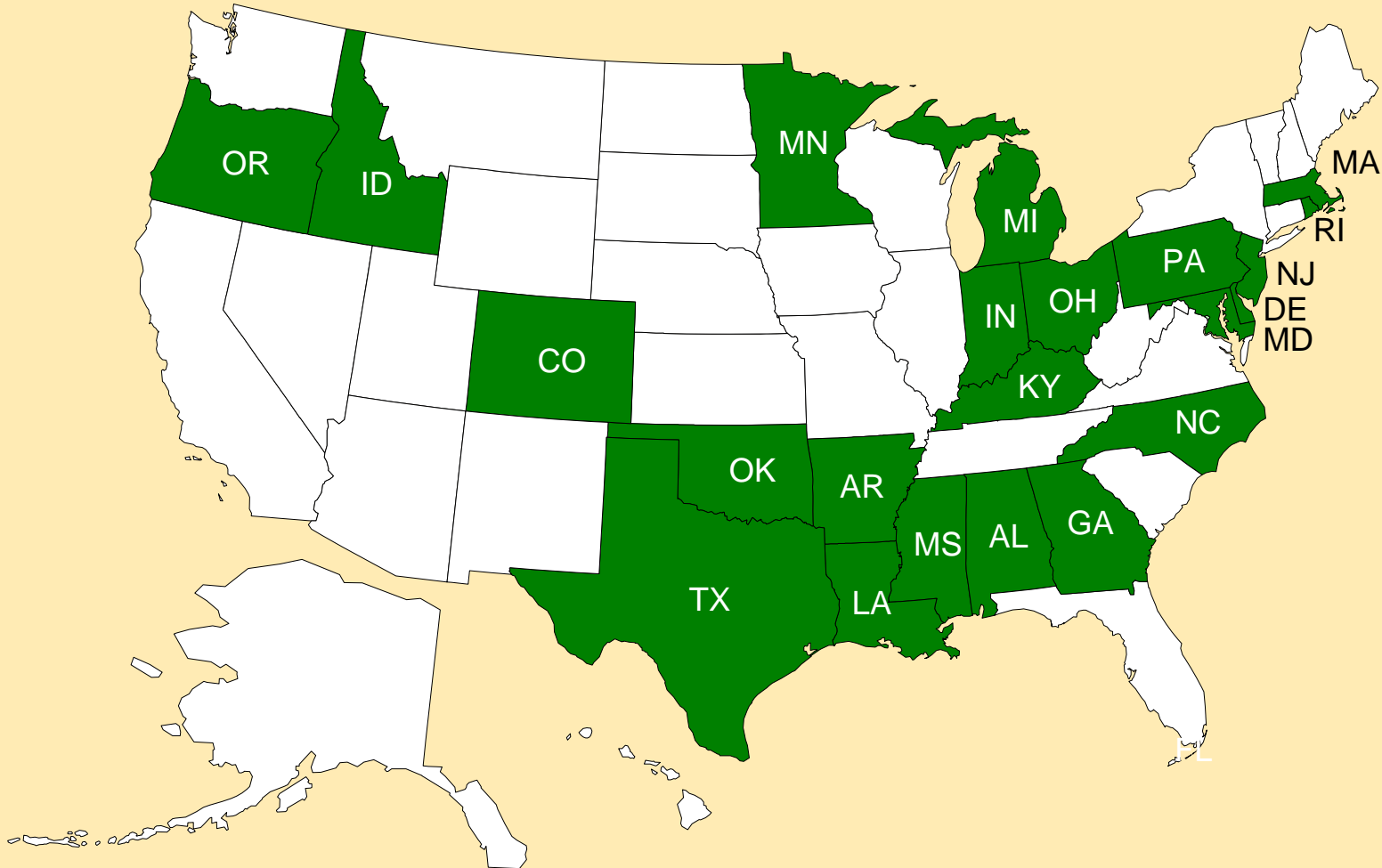
The 2005 National Education Summit on High Schools

- Forty-five governors attended the Summit, along with corporate CEOs and K–12 and postsecondary leaders.
- Addressed the fact that our schools are not adequately preparing students for college and 21st-century jobs
- Aggressive action is needed to address the expectations gap.
- As a result of the Summit, 22 states joined with Achieve to form the American Diploma Project Network.

ADP Network Policy Agenda

- Align high school standards with college and work expectations.
- Require all students to take more challenging college- and work-prep courses.
- Administer tests that measure readiness for college and work to all high school students.
- Hold high school and postsecondary institutions accountable for student success.

ADP Network: 22 states committed to improving student achievement



How is Achieve helping states?

■ Standards

- College and Work Readiness Benchmarks
- Course by course standards
- Alignment Institutes

■ Assessments

- Analysis of high school tests
- Analysis of college admissions & placement tests
- Exploring common Algebra II end-of-course test

■ Graduation Requirements

- Tracking policies state by state
- Helping states learn from each other
- Addressing dropout prevention while raising requirements

How is Achieve helping states?

■ Data Systems

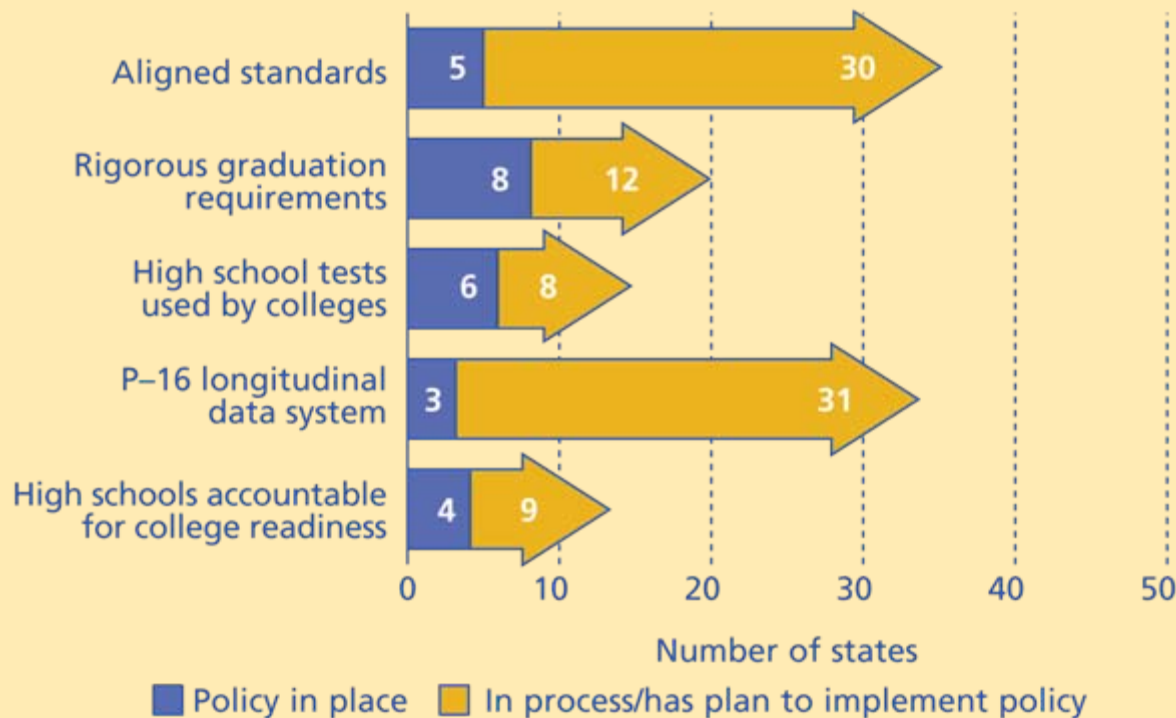
- Published 10 Elements Brochure & White Paper
- Data Quality Campaign

■ Advocacy

- Keep national spotlight on agenda
- Mobilize key constituencies
- Toolkit for state and local advocates
- Toolkit for business leaders
- Annual 50 state report

Measuring Our Progress

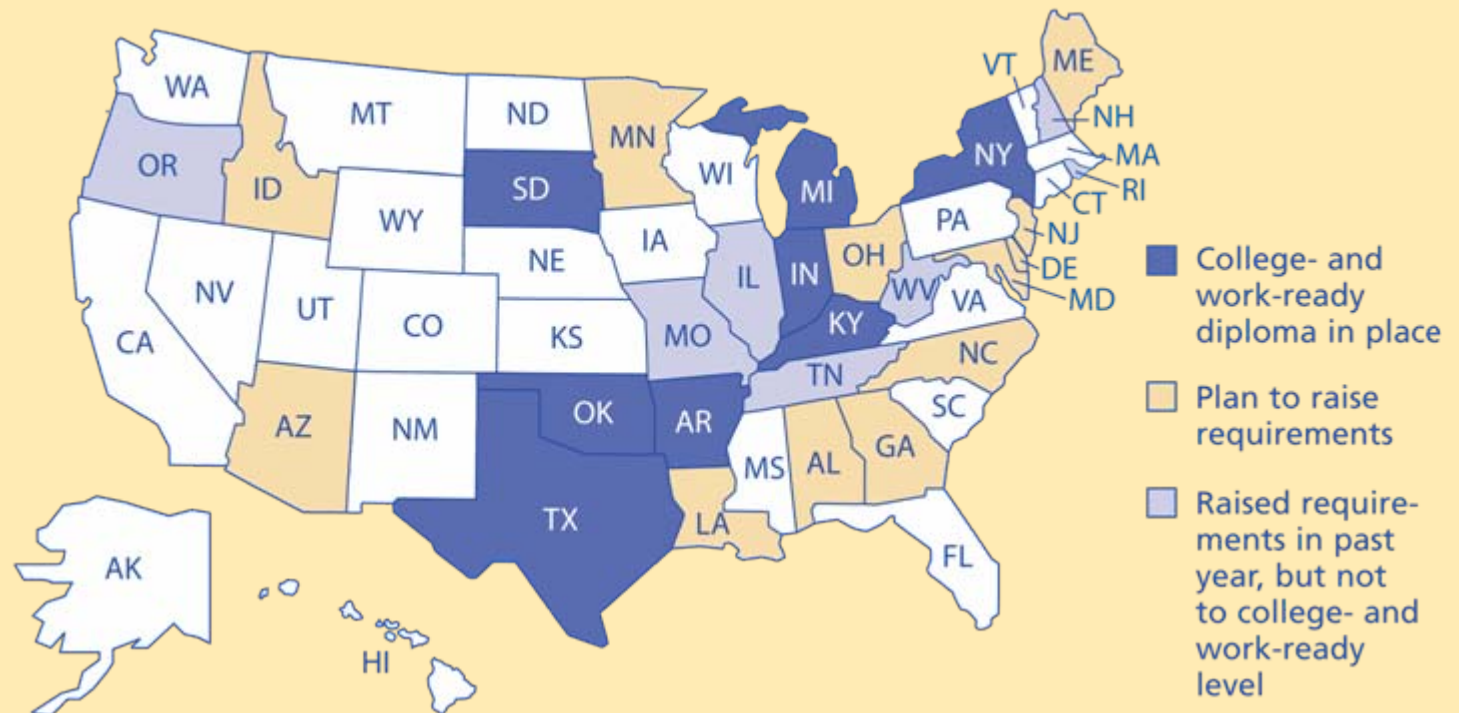
Growing Number of States Have Policies To Ensure That Students Graduate College and Work Ready



Source: Achieve Survey/Research, 2006.

Measuring Our Progress

Eight States Require a College- and Work-Ready Diploma



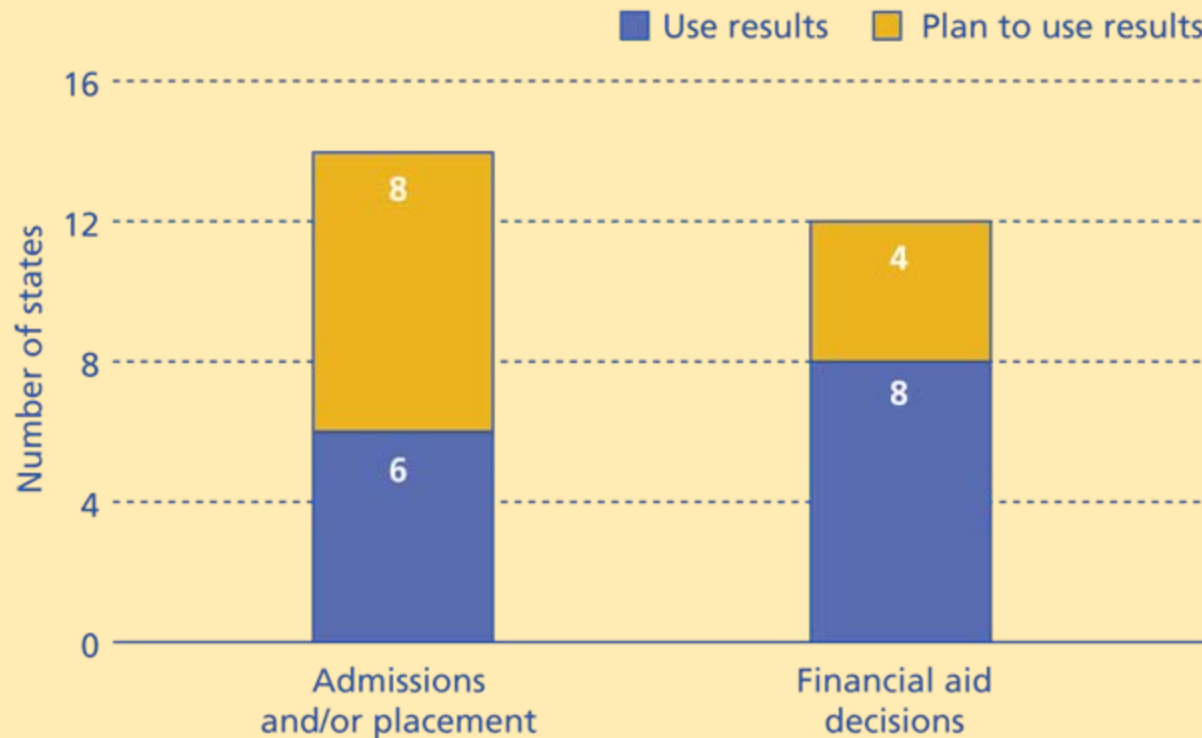
Source: Achieve Survey/Research, 2006.

Progress in raising math requirements for ALL students

2004	2005	2006	<i>Plans or Process Underway in...</i>
ADP proposes new college- & work-readiness Standards	Indiana approves Core 40	Michigan Board approves Merit Core	<i>Alabama</i> <i>Arizona</i> <i>Delaware</i> <i>Georgia</i> <i>Idaho</i> <i>Louisiana</i> <i>Maine</i> <i>Maryland</i> <i>Minnesota</i> <i>New Jersey</i> <i>North Carolina</i> <i>Ohio</i>
Texas approves Recommended Program	South Dakota approves Advances Program	Kentucky Board approves new Graduation Requirements	
Arkansas approves Smart Core	Oklahoma approves College Prep Curriculum	New York modifies NYS Regents Diploma	

Measuring Our Progress

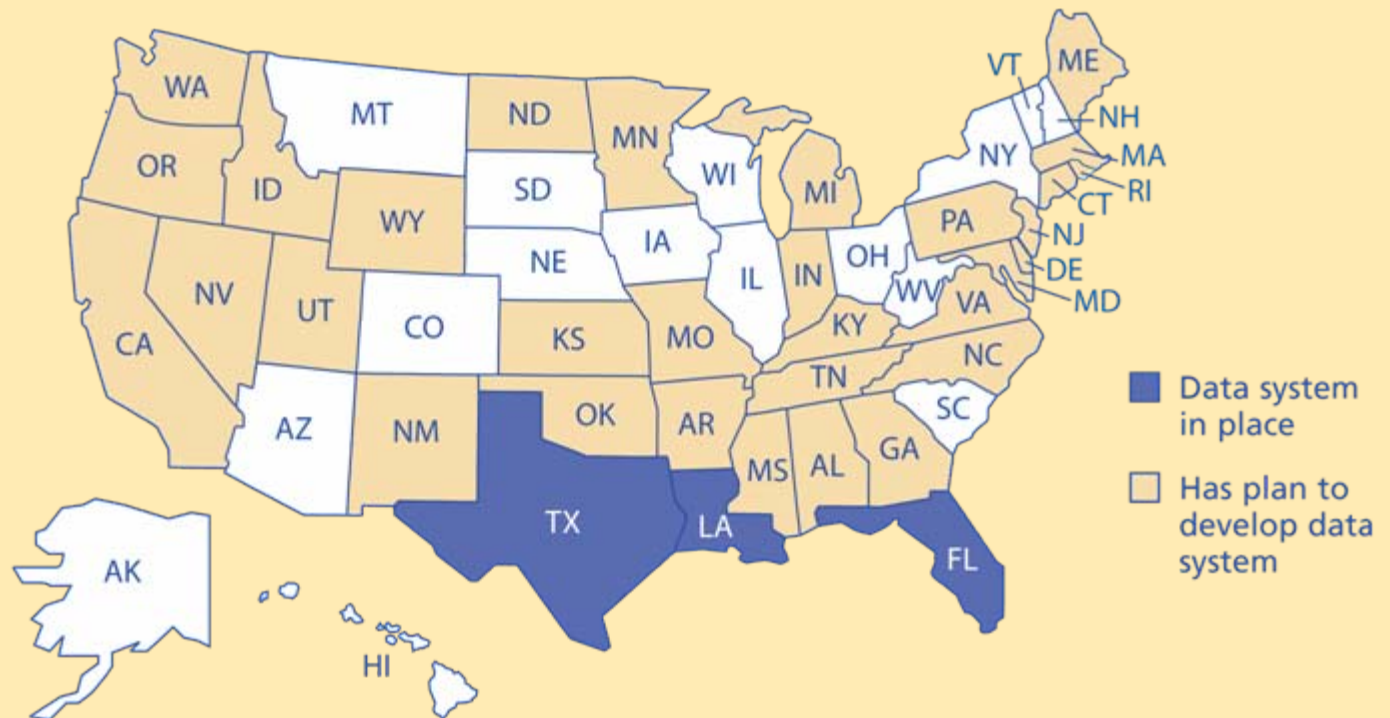
Few States Use High School Tests for Postsecondary Purposes



Source: Achieve Survey/Research, 2006.

Measuring Our Progress

States Are Building P-16 Longitudinal Data Systems



Source: Achieve Survey/Research, 2006.

For more information,
please visit Achieve, Inc., on the Web at

<http://www.achieve.org>

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CPEC June 2006